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LECTURES
ON THE
THEORY AND PRACTICE OF MEDICINE;
NOW IN COURSE OF DELIVERY AT THE
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EFFECTS OF LOSS OF BLOOD.—*Exhaustion with defective reaction considered. Exhaustion with sinking. Illustrative cases. Exhaustion with delirium. Exhaustion with coma. Observations of Dr. Abercrombie. Exhaustion with amaurosis. Effects of further loss of blood in cases of exhaustion. Sinking and sudden dissolution. Detail of cases.*

GENTLEMEN:—I proceed with the all-important subject of the effects of loss of blood. It is impossible to be in practice a day without being called upon to exercise your knowledge of this subject. The propriety, the safety of bloodletting, of its repetition especially, depends upon the *diagnosis*, not in the contracted sense in which this word is usually employed, viz., of the *disease* merely, but of the *actual case*, often a very complicated one, made up of the *previous* state of the patient, of the *disease*, of *organic changes*, and of the *effects of remedies*. I wish to lead you to study *cases* as they really occur in practice, and not diseases merely. I wish to teach you to *observe* cases in all their phases and modifications. You cannot visit a patient affected with the simplest form of inflammaton, but you have, after the first or second visit, to devote yourselves to the study, not of the disease merely, but of our present subject, the effects of loss of blood. I proceed to consider the case

2. *Of Exhaustion with Defective Reaction,*—The phenomena of excessive reaction are most observed in young persons of a robust constitution, who have been subjected to repeated bloodletting. In infants, in feeble persons, and in rather advanced years, reaction after loss of blood is apt to be defective. In this case the patient remains long pale, thin, and feeble, and becomes faint on the slightest occasions; there are deafness and dozing, from which the patient is apt to be startled by sudden loud noises; the pulse is frequent, but feeble, and perhaps irregular, and we shall look in vain for the throbbing and palpitation observed in the young and robust. This state either gradually yields to returning strength, or subsides into the state of sinking. In the study of the effects of loss of blood it is particularly necessary to bear in mind this difference of the phenomena arising out of the state of the constitution, of vigour, or of feebleness of the patient.

3. *On Exhaustion with Sinking.*—The symptoms of exhaustion with excessive reaction may gradually subside and leave the patient feeble, but with returning health; or they may yield to the state of sinking. This term is adopted not to express a state of negative weakness merely, which may continue long and issue in eventual recovery, but to denote a state of positive and progressive failure of the vital powers, attended by its peculiar effects, and by a set of phenomena very different from those of exhaustion with reaction.

If in the latter the energies of the system were augmented, in the former the functions of the brain, the lungs, and the heart are singularly impaired. The sensibilities of the brain subside, and the patient is no longer affected by noises as before; there is, on the contrary, a tendency to dozing, and gradually some of those effects on the muscular system which denote a diminished sensibility of the brain supervene, as snoring, stertor, blowing up of the cheeks in breathing, &c.; instead of the hurry and alarm on awaking, as observed in the cas of excessive reaction, the patient in the state of sinking, requires a moment to recollect himself and recover his consciousness, is perhaps affected with slight delirium, and he is apt to forget the circumstances of his situation, and, inattentive to

the objects around him, to fall again into a state of dozing.

Not less remarkable is the effect of the state of exhaustion with sinking on the function of the lungs; indeed the very first indication of this state is, I believe, to be found in the supervention of a crepitus in the respiration, only to be heard at first on the most attentive listening; this crepitus gradually becomes more audible and passes into slight rattling, heard in the situation of the bronchia and trachea; there is also a degree of labour or oppression, sighing, hurry, blowing in the breathing, inducing acuteness in the nostrils, which are dilated below and drawn in above the lobes at each inspiration; in some cases there is, besides, a peculiar catching, laryngeal cough, which is especially apt to come on during sleep, and awakes, or imperfectly awakes, the patient.

The heart has, at the same time, lost its violent beat and palpitation, and the pulse and arteries their bounding or throbbing.

The stomach and bowels become disordered and flatulent, and tympanitic, and the command over the sphincters is impaired.

The last stage of sinking is denoted by a pale and sunk countenance, inquietude, jactitation, delirium, and coldness of the extremities.

The symptoms of exhaustion, first with reaction, but gradually passing into the state of sinking, are exemplified in a remarkable manner in the following case, the circumstances of which were the more accurately noticed as they occurred in the person of a much respected friend and intelligent member of the profession, and principally under my own roof. Mr. ——, aged 40, of an extremely muscular and robust make, was returning from Nottingham into the country, on the 3rd of October, 1821, when his horse reared, fell backwards upon him, and fractured the third and fourth ribs of the left side of the chest. He was taken to an inn, and I saw him, with a surgeon, early on the following morning. He then suffered extreme pain of the side; there was a distinct crepitus, but no emphysema; the face was somewhat bruised and swollen, and ecchymosed; the pulse was 100, and strong. Sixteen ounces of blood were taken from the arm, and a dozen leeches were applied to the temples, and the same number over the fracture of the ribs; the motions of the chest were restrained by a tight bandage, and calomel and purging medicine were freely given. At noon sixteen ounces of blood were again drawn from the arm, and a surcingle was applied round the chest. During the whole of the 5th of October, or second day after the accident, Mr. —— appeared to be going on well, but at night a violent attack of pain of the side induced him to bleed himself. This was done to syncope, and as a large wash-hand basin was used to receive the blood, its quantity was not known, but must have been very considerable; seventeen leeches were then applied to the side and shoulder; great relief was obtained, and the surcingle, which had been removed, was re-applied, and the mercury and purgatives were continued. Early on the morning of the third day, there was another violent attack of pain of the side with dyspnœa. A messenger was despatched for the medical attendants; but, before their arrival, Mr. —— had again bled himself, and taken sixteen ounces of blood, being unable to endure the pain; in another hour eight ounces more blood were drawn, the patient sitting upright; this was followed by syncope and great relief from the pain.

On the fourth day Mr. —— was removed a distance of about one mile to my house, and bore the journey on a litter extremely well, having previously lost a teacupful of blood; he expressed himself as feeling better than at any time since the accident. In the evening an increase of pain took place, and about seven ounces of blood were taken with great relief.

In all it would appear that Mr. —— lost at least 120 ounces of blood.

On the fifth day we were joined in consultation by an eminent physician and surgeon. There was much pain of the side; and it was at first proposed to take away more blood. But as I had observed some of the symptoms which I knew to indicate reaction from exhaustion, the venesection was omitted, and the application of leeches only was proposed; the symptoms, however, increased, and the leeches were not applied.

On the sixth day the following circumstances were noticed:—There was some degree of dyspnœa and of pain in the side, and the patient had removed the surcingle in the hope of obtaining relief; the mouth was affected with ptyalism; the pulse was 100, and had acquired a peculiar jerk; there were violent throbbings of the carotids, a pulsatory pain of the head, and intolerance of noise, and, in a slight degree, of light; at one time in the morning of this day great agitation had been induced by a knock at the door. On account of the intolerance of sound, it was directed that the pavement should be strewed with straw, and that the ringing of the bells of the adjacent church should be avoided. The bowels were freely moved; a draught with tinctura opii and spiritus ammoniæ aromaticus was given, with broth, arrowroot, sago, &c.

Seventh day. The patient was rather better towards yesterday evening. All the symptoms of strong reaction continued as before. The head has been much relieved by the application of a cold lotion.

On the succeeding day the pulse was only 84, and had lost, in some degree, its peculiar jerk; the carotids beat less violently; the head was so much better as to render the

lotion unnecessary; there were more tranquility, and some hilarity of mind. The aperients, the anodyne, and the nourishment were continued.

I saw my patient about 3 o'clock, A.M., on the ninth day, and I then heard the slighest degree of that crepitus in the breathing, which I have already noticed as one of the first symptoms of sinking. The medical gentlemen met at nine, and the general symptoms were then so little changed that no degree of alarm was excited in their minds; I mentioned my fears, and the ground on which they were formed. At this meeting cupping was proposed; but the changes in the patient were afterwards so rapid that in the evening brandy was recommended. The pulse was 110 in the middle of the day, unattended with its previous force and jerk, and easily compressible; the beating of the carotids had subsided; a slight degree of stupor was observed; on being left undisturbed, the patient fell asleep and snored; there was some labour in the respiration, and a troublesome, dry, laryngeal cough; and, although the bandage was loose, there was no pain of the side of the chest; the countenance was anxious.

The symptoms gradually assumed a more and more alarming form during this day; at night there was considerable stupor, and when the patient was roused there was sometimes a degree of delirium; during this sleep there were much snoring and puffing up of the cheeks in expiration, something like the symptom which the French writers call "fumer la pipe;" on awaking he would feel greatly concerned that he should have appeared to blow in your face; there was much flatulence; the motions were extremely offensive, and passed at each attempt to void urine.

After midnight he could scarcely be roused; but if awakened he would speak collectedly, but in a hurried manner, and said he felt "such a dying feel;" the pulse was about 120. I saw my patient at 3 o'clock, A.M.; there was little change in the pulse or other symptoms, but in a minute or two the pulse became slow, feeble, and irregular; he altered rapidly, and I found that he was moribund; within a few minutes more he expired.

On dissection the pleura was found morbidly red in the vicinity of the fracture, but not wounded; there was some effusion of lymph in its cavity. The right lung was found united to its contiguous pleura by old adhesions.

It would, perhaps, be difficult to offer any observations on the nature and cause of excessive reaction; but it is plain that the state of sinking involves a greatly-impaired state of the functions of all the vital organs, and especially of the brain, from defective stimulus. The tendency to dozing, the snoring and stertor, the imperfect respiration, the impaired action of the sphincters, the defective action of the lungs, and the accumulation of the secretions of the bronchia, the feeble and hurried beat of the heart and pulse, the disordered state of the secretions of the stomach and bowels, and the evolution of flatus, all denote an impaired condition of the nervous energy. The state of sinking may, indeed, in certain points of view, be compared with the state of the functions in apoplexy, and to the effects observed on abstracting the influence of the brain and spinal chord by dividing the eighth pair of nerves, or by destroying the lower portion of the chord.

There are many very interesting, though cursory, notices of the subject under discussion in the work of M. Andral, entitled, "Précis d' Anatomie Pathologique," under the head of "Anemie," confirmatory of the views which I have laid before the profession.

At the 81st page of his first volume M. Andral observes, "When the economy has lost, within a short space of time, a very large quantity of blood, the action of several organs is disturbed in a remarkable manner; the nervous system is particularly the seat of disorder; the patient is not only subject to sinking and fainting, but the real weakness produced by the detraction of blood is marked by phenomena which would seem rather the result of excessive irritation of the nervous centres; delirium supervenes; the patient is attacked with convulsions; the heart palpitates violently; the respiration becomes embarrassed, as in congestion of the lung. In this latter case dyspnœa exists, because the chest contains too much blood in proportion to the air which enters the bronchial cells; in anemia there is also dyspnœa, but from a different cause; here we have the proportion of air too great for the quantity of blood to be vivified, and the phenomena produced resemble those arising when an animal is placed under a glass bell, filled with pure oxygen. The digestive organs are also deranged, because the stomach is unable to act without being the seat of a certain degree of congestion, which cannot take place in anemia. These different phenomena gradually disappear in proportion as the blood is reproduced."

At the 769th page of volume the second he adds,—"Anemia of the nervous centres appears under the influence of the same causes which produce anemia of any other organ. It may be confined to the brain, or coexist with general anemia. It occurs either during the course of chronic disease, or of certain acute diseases, where the symptoms would seem to announce a state of irritation of the brain, although after death the organ is found remarkably pale."

But the most interesting remark of this writer occurs at page 46, of volume the first.

Speaking of the sinking state generally, M. Andral confirms, in almost the same terms, the remark which I had made so long before, in regard to sinking from loss of blood, and other causes, that the lungs are "comme ils le sont chez les animaux dont les nerfs pneumogastriques ont été coupés, ou chez les individus frappés d'apoplexie."

4. *Of Exhaustion with Delirium.*—It has already been seen that delirium is a frequent result of exhaustion from loss of blood. The following case, with which I have been favoured by Dr. Abercrombie, is, as that gentleman observes, in all its circumstances, one of considerable interest:—

"A lady, aged about 35, after delivery of her fifth or sixth child, recovered favourably for a fortnight, when she became affected with pain and deep-seated hardness in the right side of the pelvis, painful to the touch, and accompanied by a considerable degree of fever. After repeated topical bleeding, and various other remedies, the febrile state subsided, the swelling lost its tenderness, and it seemed to be gradually diminishing in size; but its progress was slow, and, after three or four weeks from the time of its appearance, she was still confined to bed, and was suffering a good deal of uneasiness; her pulse was now calm, but she was considerably reduced in strength. At this time she was one day alarmed and agitated by some family occurrence of a trifling nature, and immediately began to talk wildly and incoherently; and, after a restless night, she was found next day in the highest state of excitement, talking incessantly, screaming, and struggling, with a wild expression of countenance, and a small rapid pulse. She was now treated by leeches to the temples, cold applications to the head, purgatives, &c., but with little or no benefit; and, on visiting her next day, I found her sitting up in bed, with a look of extreme wildness, both her hands in constant motion; she was talking incessantly, loudly, and wildly, and I learnt that she had not ceased talking in this manner for one instant for the last twelve hours. Her pulse was rapid and feeble, and her countenance expressive of exhaustion. This was a state which I had repeatedly seen fatal under various modes of treatment, and I certainly expected no good of the case; but in consultation with a highly respectable friend who had charge of it, I proposed to try a treatment purely stimulant. A full glass of white wine was accordingly given, and ordered to be repeated every hour. On visiting her at the end of the fourth hour, I found her composed and rational; her pulse 90, and of good strength; and from this time there was no return of the symptoms. The tumour in the right side increased in size, suppurated, was opened, and healed favourably, and she is now in perfect health.

Dr. Abercrombie adds, "I have several times seen a state resembling mania take place after large bleeding in inflammatory diseases, and subside gradually as the patients recovered strength. The most remarkable of these, that I recollect at present, were after pneumonia, and acute rheumatism. Many years ago I saw a man who was seized with bleeding from the nose to such an extent, that at last it became necessary to arrest it by pieces of sponge carried up from the fauces. Next day he was without complaint, except great weakness; on the third day he became highly maniacal; pulse generally from 90 to 100, and soft. After various treatment with little benefit, for eight or ten days, an emetic was given; he vomited smartly, and in doing so the plugs were forced out of his nose. Very soon after this he fell asleep, and after a long sleep awoke quite rational, and continued so."

I am persuaded that loss of blood is by far the most frequent and influential source of delirium, or mania, occurring in the puerperal state. It would lead me into too long a discussion to treat of this point at present. Besides, I purpose making it the subject of distinct consideration at some future period. Meantime I would beg to refer you to my work on "Some Diseases of Females," pp. 251—256; and to Dr. Gooch's "Account of some Diseases Peculiar to Women," chap. ii., and especially pages 144, 145.

5. *Of Exhaustion with Coma.*—It has already been stated that exhaustion from loss of blood is apt to induce a state of coma. This effect is most obvious in the case of infants and children; but it is not confined to this early period of life. Next to childhood, the feeble state of old age appears most prone to this form of exhaustion, as I think youth and vigour are to delirium.

Dr. Abercrombie observes, "In the last stage of diseases of exhaustion, patients frequently fall into a state resembling coma, a considerable time before death, and while the pulse can still be felt distinctly; and I have many times seen children lie for a day or two in this kind of stupor, and recover under the use of wine and nourishment. It is often scarcely to be distinguished from the coma which accompanies diseases of the brain. It attacks them after some continuance of exhausting diseases, such as tedious and neglected diarrhœa, and the patients lie in a state of insensibility; the pupils dilated, the eyes open and insensible, the face pale, and the pulse feeble. It may continue for a day or two, and terminate favourably, or it may be fatal. This affection appears to correspond with the apoplexia ex inanitione of the older writers; it differs from syncope, in coming on gradually, and in continuing a considerable time, perhaps a day or two; and it is not, like syncope, induced by sudden and temporary causes, but

by causes of gradual exhaustion going on for a considerable time. It differs from mere exhaustion, in the complete abolition of sense and motion, whilst the pulse can be felt distinctly, and is, in some cases, of tolerable strength. I have seen in adults the same affection, though it is perhaps more uncommon than in children. A man, considerably advanced in life, in consequence of a neglected diarrhœa, fell into a state closely resembling coma; his face pale and collapsed, but his pulse of tolerable strength. An elderly lady, from the same cause, had loss of memory and squinting. Both these cases recovered by wine and opiates; in the former blistering on the neck was also employed. Richter states that amaurosis has been produced by hæmorrhage, cholera, and tedious diarrhœa; and he mentions particularly a dropsical woman who became blind when the fluid was evacuated from her abdomen by tapping.

"On this interesting subject I shall at present only add the following remarkable illustration from an affection of hearing. A gentleman, about thirty years of age, came to Edinburgh, from a distance, for advice in regard to an obscure affection, referred chiefly to the stomach, which had reduced him to a state of extreme weakness and emaciation. As the debility had advanced, he had become considerably deaf; and, when I saw him, he was affected in the following manner. He was very deaf while sitting erect or standing; but, when he lay horizontally, with his head very low, he heard perfectly. If, when standing, he stooped forward, so as to produce flushing of his face, his hearing was perfect; and, upon raising himself again into the erect posture, he continued to hear distinctly as long as the flushing continued; as this went off, the deafness returned.

"Upon the whole, it seems highly probable that a certain balance of the circulation of the brain is necessary for the healthy condition of its functions; that they are equally impeded by the interruption which takes place in apoplexy, and the diminished impulse which occurs in these opposite conditions. What, indeed, is syncope but an abolition of sense and motion? It is preceded by giddiness, tinnitus aurium, and impaired vision; and is accompanied by blindness, dilated pupil, perfect insensibility, and not unfrequently passes into convulsion. It differs, then, from apoplexy, chiefly or entirely, in the state of the general circulation, the symptoms accompanying the two affections being remarkably similar, and the effect upon the sensorial functions almost entirely the same."

For the following most interesting case of coma, and finally of sudden sinking, from exhaustion, I am greatly indebted to a medical friend.

"An opulent farmer, nearly 60 years of age, tall and well-formed, of active habits in the early part of life, mostly of the sanguineous temperament, and of the bilious diathesis, was affected with hereditary gout at an early period of life, and continued to be a martyr to that disease. He had, for many years, been occasionally affected with internal spasm in the cardiac region, attended with urgent sickness and giddiness, that form of complaint, namely, which is commonly called gouty spasm of the stomach. The biliary system was sometimes so much deranged as to give rise to jaundice. He had more than once been attacked with pneumonia, which was always sufficiently active to require one or more general bleedings.

"About five months before the fatal event which I have to describe, he was seized with apoplectic symptoms. He was saved from death by prompt treatment by bleeding and purgatives. From this time, however, his health became wholly unsettled, and his frame evidently enfeebled. In the beginning of summer he was occasionally affected with sub-acute gout, both in the upper and lower limbs, and also with lumbago. Cramps and jactitations prevailed much in these attacks; the depression of his spirits was extreme; the tone of the nervous system was in every way reduced.

"After exposure in an open carriage, on one fine day, with the wind in the east, he was suddenly attacked with a severe pain in the abdomen, chiefly in the right hypochondrium, and towards the stomach, the respiration being at the same time exceedingly painful and laboured. His medical attendant viewed the disease as acute hepatitis, and bled him profusely from the arm, and with immediate relief, which was rendered more complete by the free action of purgative medicines. There was a slight recurrence of the symptoms in the course of forty-eight hours, and large depletion from the vessels was again practised, so that at the end of three days, nearly seventy ounces of blood had been abstracted by means of the lancet, cupping, and leeches.

"When the reporter of this case first saw this patient, the state of the vital powers was seriously depressed. The patient appeared bloodless, and cadaverously pale. The superficial veins everywhere had the look of being quite empty. The tongue was pale, and coated with brown fur, the saliva was abundant, but extremely viscid; the eyes were glassy, the pupils dilated, the sight imperfect, the voice was very feeble; there was much subsultus tendinum; the senses occasionally wandered; there was a lethargic state without any refreshing sleep; on the contrary, there was much restlessness; the jactitation of the limbs was considerable; the respiration, when the eyes

were closed, was noisy, and distinguished in a great degree by puffing, as a smoker puffs out the smoke from his pipe. The pulse ranged from 100 to 120, and was truly the irritable pulse; it was throbbing, and also attended with a jerk; his pulse, in health, was known to be about 66.

"The treatment had, in every way, been strictly antiphlogistic; the diet being confined to gruel, barley-water, and tea. At this juncture it appeared imperative to change the regimen. The patient had a frequent disposition to faint, and actually appeared to be sinking into death. Cordial nourishment, as gruel and brandy, eggs, wine, beef-tea, &c., were administered with caution. The former fluids had been rejected from the stomach, but the cordials just mentioned, were retained. Cordial medicines were also given; in the first instance, a volatile saline draught, with cordial confection; and due attention was paid to the bowels.

"The powers of the patient were soon revived, and in a few days acquired a remarkable degree of improvement. After a short time, he was enabled to take airings in a carriage daily, but still there was no promising convalescence. The pulse never fell below 90, and continued bounding; there was an unceasing lethargy, and in sleep the respiration was attended with the puffing. Subsultus tendinum continued to prevail.

"At the end of a month from the time of the first attack, the unfortunate patient became suddenly seized with stertorous breathing, while in the act of taking some nourishment. The muscles of the face were distorted, all the superficial vessels of the head and neck were instantly distended, and in less than two minutes death closed the scene.

"No examination of the body was permitted."

6. *Of Exhaustion with Amaurosis.*—It sometimes happens that the most prominent symptom in exhaustion from loss of blood, and, indeed, from some other causes, is a state of amaurosis. Upon this point I cannot do better than relate the following interesting observations of Mr. Travers.

"A loss of balance in the sanguiferous system, occasioning an undue determination of blood to the head, often exists, distinct from general plethora, and is aggravated by loss of blood. The following case is an example:—

"A young medical man came to me one morning, from the country, in extreme anxiety, with an earnest solicitation that I would immediately apply a ligature to his carotid artery. This gentleman, aged 25, was of short stature, and constitutionally healthy. His pupils were large, and his countenance was suffused, and bore the appearance of preternatural determination of blood to the head. He had been the subject of two attacks of inflammation; one in April, the other in October of the same year; during which he lost upwards of an hundred ounces of blood. He had now a constant heavy pain in the head, chiefly over the coronal suture, and in the direction of the sinuses, with tinnitus of the left ear. After stooping the giddiness was extreme, and a golden-coloured spot, edged with black, appeared floating before the eye. He had been troubled with muscæ in excess, for a year and a half past; he had now fire-sparks flashing before the sight, and saw a pulse in the choroid synchronous with that of the wrist. When looking at near objects he was not troubled with muscæ, but they were always numerous in proportion as the object was remote. He did not complain of much dimness. His complaints were not relieved by topical bloodletting. He recovered gradually but perfectly, under a regulated diet, and a course of the blue pill with saline aperients.

"The amaurosis, from depletion, is sometimes mistaken for its opposite, viz., that from plethoric congestion; this is owing to the coincidence of a dilated and immoveable pupil, muscæ, and a deep-seated pain in the head, with occasional vertigo; and its occurrence often in a corpulent habit. It succeeds somewhat abruptly to uterine floodings, and large and sudden depletion for acute diseases. The pain is not confined to the region of the orbit, though it affects chiefly, if not exclusively, the same side of the head; it is that peculiar nervous pain to which women are subject after uterine hæmorrhage, attended with a sense of defined pressure, as of an iron finger on the brain; and sometimes a distressing jarring noise, like that of a mill or threshing-floor, or the rattling of the shingles as a heavy wave of the sea recedes. It is, perhaps, connected with an imperfect injection of the medullary substance. By a cautious use of tonics it is relieved; by whatever lowers or stimulates, whether diet or medicine, it is decidedly aggravated. The vision in this form of amaurosis is further enfeebled by the loss of as much blood as flows from two or three leech-bites. This is not imaginary; I have seen distinctly marked cases of it, in which large and copious venesection was still urged as the only resource of art. This I consider to be a fatal mistake."

Of the Effects of further Loss of Blood in Cases of Exhaustion.

1. *Of the Substitution of Syncope for Reaction.*—The symptoms of exhaustion with reaction, have, I am persuaded, frequently been mistaken for those of inflammation, or other disease of the head or the heart. Under this impression, recourse has fre-

quently been had to the farther detraction of blood by the lancet; and the effect of this practice is such as greatly to impose upon the inexperienced,—for all the symptoms are, perhaps, greatly relieved.

It was some time before I could fully comprehend the nature of this fact. I had satisfied myself that, in certain cases, the symptoms were those of loss of blood; and yet it appeared no less certain that those very symptoms were relieved by the lancet. At length I discovered, by a careful observation, that the symptoms which were relieved were those of reaction; and that the mode of relief was by the substitution of syncope; that the relief endured as long as the state of faintishness continued, but returned, as this state gave way, to the rallying and reaction of the vital powers.

Another circumstance, equally interesting and curious, was, that, within certain limits, the remedy which relieved for a time, eventually only added to the severity of the malady, for this was apt to return, after a certain period, in a still more aggravated form. It is natural, indeed, to suppose, that, unless there was a tendency to the failure of the vital powers, the reaction of the system, and the painful circumstances attending it, would be greater after a third or fourth loss of blood than after a first or second; indeed, there are seldom the symptoms of reaction after one flow of blood, however great or profuse; it is the repetition or protraction of the cause which, as I have already observed, is essential to produce this effect.

It is observable, too, that, in cases of exhaustion with reaction, syncope is very soon produced by the farther loss of blood. This fact is of importance, because it may be regarded as a sign of the state of exhaustion, when this is obscured by the reaction of the system, and as a warning voice against the further and inconsiderate use of the lancet.

Mrs. ——, aged 21, and of a rather feeble constitution, was confined of her first child; the bowels had been constipated, and were moved several times by a dose of castor-oil, but, becoming again confined, she became much indisposed on the fifth day, with flushing of the countenance, noise in the ears, as of a rushing wind or the explosion of crackers, flashes of light on lying down, beating of the carotids, &c., the pulse being 120 in a minute. Fourteen ounces of blood were taken from the arm, which induced deliquium with relief to the symptoms. About seven hours afterwards, the noises in the head had returned, and the pulse was 120; twelve ounces of blood were again drawn, and the patient again fainted, and was again relieved. Eight ounces of blood were taken the next day. On the succeeding day, the medical attendant was called early in the morning; there had been little sleep, but much lowness for several hours, the patient then complained of violent beating in the head; the pulse was 120. A teacupful of blood was taken, which induced faintishness, and abated the beating of the head. By noon she was again flushed, and the beating had returned in an aggravated degree. From this period the patient was bled no more; but recovered under the influence of aperient and anodyne remedies.

Mrs, ——, aged 35, was confined in June, 1811; the expulsion of the placenta was followed by much hæmorrhage, which induced great exhaustion. On the tenth day she was seized with severe shivering, heat, throbbing pain of the head, and intolerance of light and sound; ten ounces of blood were taken from the arm, about 10 o'clock, A.M., which induced faintishness and relief. At 7 o'clock in the evening, the pain of the head was as severe as ever; twelve ounces of blood were taken from the arm; this was followed by such dreadful faintness and gasping breathing, as even to lead to the apprehension of dissolution;—on recovering, the pain and intolerance of light and sound returned as before. The patient became affected with all the symptoms of exhaustion with reaction, but gradually recovered without farther bloodletting.

It gives me great pleasure to add, in this place, the farther testimony of Mr. Brodie to the facts and principles which I have published in relation to this interesting question:—

"In taking a view of the various satisfactory reasons which may be urged in favour of a particular plan of treatment in cases of concussion of the brain, we must not overlook the circumstance that this treatment may be carried too far; and we must endeavour to avoid the error which some surgeons fall into, of resorting to a too free use of the lancet. At first, when the reaction of the heart has taken place, it may be right that the patient should lose a considerable quantity of blood, so as completely to subdue the force of the circulation. Afterwards, for the most part, it is only an occasional bloodletting that is required, and that to a moderate extent. It has appeared to me that this mode of proceeding has usually done more, both towards relieving the present symptoms and preventing subsequent inflammation, than a more active system of depletion; and where very large quantities of blood have been already taken away, if inflammation should show itself, our resources are comparatively limited, and we are not able to meet it with that energy and vigour which the circumstances of the case require.

"Where bleeding has been carried to a great extent, symptoms frequently occur which, in reality, arise from the loss of blood, but which a superficial observer will

be led to attribute to the injury itself, and concerning which, indeed, it is sometimes difficult, even for the most experienced surgeon, to pronounce, in the first instance, to which of these two causes they are to be referred. Repeated copious bloodletting is of itself adequate to produce a hardness of the pulse, which we shall in vain endeavour to subdue by persevering in the same system of treatment. In many individuals it will produce headach and confusion of mind, not very different from what the injury itself had previously occasioned. These things may be observed especially in young females who are disposed to hysteria, and whom I have often known to suffer from a continued aggravation of such symptoms as I have described, while the system of depletion has been continued, recovering immediately on the use of the lancet being laid aside, and on their being allowed to take solid nourishment, with occasional doses of carbonate of ammonia. Dr. Marshall Hall has published, in the thirteenth volume of the 'Medico-Chirurgical Transactions,' some excellent practical observations on the effects of copious bloodletting, many of which are applicable to the cases mentioned above."

2. *Of Sinking, or more Sudden Dissolution.*—If the loss of blood be repeated still farther, not only syncope, but a state of sinking is induced; the effects of reaction are in this case permanently relieved, whilst a different series of phenomena, already fully described, is established. This transition of reaction into sinking may either be spontaneous, as in the case of Mr. ——, mentioned in my last lecture, or it may be the effect of a last bloodletting, the state of syncope scarcely ceasing, no reaction following, but the total though gradual failure of the vital powers.

When the last bleeding has been considerable, it has in some cases been followed by the most dreadful gaspings, and other convulsive motions, and death. It should be observed, that between the most gradual sinking and the most sudden dissolution, as the effects of bloodletting, there is every intermediate shade, with the phenomena of which it is of the utmost importance to be acquainted. These varied phenomena may, I think, be collected from the observations which have been made in this and the preceding lectures. They are farther illustrated by the following cases, which exemplify the fatal effects of loss of blood, as supervening more or less gradually upon the use of the lancet.

Mrs. ——, aged 30, had been affected with what appeared to be a slight attack of influenza; she was seized with rigor, and soon afterwards the pains of labour came on and issued in delivery in about fifteen hours, at nine o'clock, A.M.; this was followed by much fever, the countenance being flushed, the pulse frequent, and the breathing difficult, with incessant cough; these symptoms increased towards evening, and in the night, and about forty ounces of blood were drawn from the arm at two bloodlettings, and the next morning twelve leeches were applied to the chest, with great relief. In the evening a blister was applied. The night was passed more comfortably; she dozed a little and was cheerful, and continued relieved in the morning. As a preventive against a relapse, however, three teacupfuls of blood were taken. The patient became faint during the flow of the blood, sank from that time, and never again rallied. She became extremely feeble, and could scarcely articulate, and, from being cheerful the day before, was now impressed with the conviction of approaching dissolution, and expressed herself as unable to recover from the last bloodletting. During this day, Saturday, and during the two succeeding days, there was a state of extreme exhaustion, and still a sense of load at the chest, and pain of the side.

On the succeeding Tuesday the countenance was observed sometimes to flush to a deep scarlet, and then to become quite pallid, and a profuse perspiration frequently ran down the face; the pulse was extremely frequent, and the pain severe on coughing; there was no delirium, though she awoke hurried from sleeps which she described as "just like death." During the four following days there was little obvious change; distressing faintings usually came on about two or three o'clock, P.M. On the Sunday she became drowsy, and evidently more sinking; this state continued to increase, and she died in the evening of the following day.

The last bloodletting, in the case just given, was obviously, though rather gradually, fatal. In the present case the fatal event supervened immediately on the use of the lancet. Mrs. —— was of pale and sallow complexion and weakly constitution. Six days before her confinement of her first child, she was awoke in the night by severe pain of the head confined to one spot. This pain continued several hours, when Mrs. —— applied to her medical man; she was completely relieved by losing sixteen ounces of blood, followed by purgative medicine, and she continued well. Mrs. ——'s labour occurred on the 1st of September, 1817, and was rather tedious, but natural, and she had no complaint until the second day, when she experienced a second attack of pain in the head, but less violent than the previous one. She was seen six hours after this attack; she then complained of pain and beating of the head, about the anterior part of the right parietal bone; the skin was hot, and the pulse frequent and strong. Sixteen ounces of blood were taken from the arm, leeches were ordered to be applied to the temples, and an enema and purgative medicine were

prescribed. In three hours' time Mrs. —— was again visited, and it was deemed necessary to abstract more blood; six or eight ounces were therefore taken; faintishness was induced, and the symptoms were abated.

On the succeeding morning, September the 4th, the symptoms still remained the same; the surface was hot; the bowels had been purged, and the evacuations were natural. The saline mixture was ordered. At noon, the symptoms remaining as before, the purgative medicine was repeated and a blister was applied. In the evening, the evacuation of the bowels was satisfactory, and the pain of the head was not severe, but there were much beating and a rushing noise; and there were restlessness, and a teasing, irritative cough. A draught with thirty drops of the tinctura opii was administered.

On the morning of September the 5th, Mrs. —— expressed herself as being much better from having enjoyed comfortable sleep. The surface was still hot, and the head still affected as before. In the evening there was a degree of tenderness in the region of the uterus. She dreaded the idea of being bled, from the faintishness she had before experienced from it, and said it would certainly kill her. On the morning of the 6th, the pain in the region of the uterus was relieved; the head was affected as before; the window was kept open for want of air. In the evening Mrs. —— complained of being faint and low. A mixture with camphor and sulphuric æther was prescribed.

On the 7th, the irritative cough again occurred; the pulse was frequent, from 120 to 130; and the other symptoms remained unabated. A physician was consulted. Sixteen ounces of blood were directed to be taken from the arm; a grain of calomel was given every three hours, and the effervescing medicine was ordered.

On the morning of the 8th, Mrs. —— appeared to be relieved in every respect; the heat of surface and the pain of the head were diminished; the blood presented the buffy coat. It was thought proper, however, to abstract more blood. Four teacupfuls were taken; the most dreadful fainting followed, with gasping, open mouth, a convulsive action of the diaphragm, and in an hour or two death closed the scene.

The following case was forwarded to me by a medical friend:—

A gentleman, nearly seventy years of age, the subject of frequent gouty paroxysms, whose constitution was broken down, and who was of a pallid complexion, was suddenly seized with severe pain in the side, hot skin, quick full pulse, and difficulty in breathing. A physician was consulted, who recommended the abstraction of six ounces of blood. The arm was tied up accordingly, the patient being in bed; before two ounces were taken away his pulse sunk, and heavy perspiration came on, with faintness. The patient was placed horizontally in bed, and it was some length of time before his medical attendant deemed it prudent to leave the house.

"The blood taken away, manifested the usual character of inflammation, but the pain in the side was not removed. On the following morning he was again visited by his physician, who, finding that the pain and other symptoms detailed, were not relieved, directed the bleeding to be repeated to six ounces; this was again attempted, but before one ounce escaped, he became so alarmingly faint that he fell back in the bed, the circulation being suspended for a length of time, and his dissolution expected to take place. Stimuli of every description which could, at the moment, be brought forward, were resorted to; after a considerable lapse of time, the heart's action was feebly renewed, but its power was never again restored; and the pain in his side was not relieved. From this time he progressively sank, and in a short time expired."

I will not diminish the effect which these cases *must* produce upon your minds, by any observations.

LECTURES
ON
MATERIA MEDICA AND THERAPEUTICS;
NOW IN COURSE OF DELIVERY
AT THE
WINDMILL-STREET SCHOOL OF MEDICINE.
BY
GEORGE G. SIGMOND, M.D.

CINCHONA.—*Its value in typhus fever, and in small-pox. Practice of Huxham and Mead. Efficacy of the bark in mortification. Various diseases in which the bark may be administered. Discovery of cinchonia and quinine. Labours of Dr. Duncan. Methods of obtaining these preparations. Properties and medicinal effects of cinchonia and quinine.*

GENTLEMEN:—The Peruvian bark is the most valuable remedy we possess in the last stages of typhus fever; indeed, it seems to possess a most remarkable power over the frame when the nervous energy has been much exhausted. It revives, refreshes, and strengthens the system far more decidedly and permanently than any diffusible stimulus, or any tonic with which we are acquainted, when all inflammatory action has ceased, and the patient seems to be sinking under the greatest depression. Where sup-

porting and an invigorating nourishment are necessary to keep up the *vis vitæ*, the tincture of bark is the most grateful cordial, the most valuable friend we can offer. The practice of Huxham, from whom we have obtained the formula of the compound tincture of bark, long served as the guide for physicians in the treatment of typhus, or slow nervous fever; and to this day it remains as a proof of great sagacity, of unwearied observation, and well-directed experience. His essay on fevers, and his dissertation on the malignant ulcerous sore throat, I should very strongly recommend you to peruse; you will find no better work on the subject, written in our times; it is a pity that the style of writing of seventy years since should have almost become obsolete, and this renders a most important book tedious and irksome to the reader. In modern practice opium and wine have in some measure superseded the employment of bark; the reasons that have been most generally assigned are, that this drug requires to be given in powder to be most efficacious, and that the digestive organs are very frequently in a state of such apathy as to be incapable of assimilating it for the vessels to take it into the system, and that it very often remains for a considerable length of time not only unchanged in the stomach, but that it becomes a source of annoyance from the weight and oppression to which it gives rise, until at last nausea, and an effort to dislodge it by vomiting, occur. A dose of half a drachm, which is the quantity which is most generally preferred, is too often productive of very great uneasiness; and, although its taste be sufficiently covered with milk, or wine, or decoction of liquorice, still it is nauseating. The powder, too, to be really efficacious, must not be fine, too long pulverisation renders it much less active; the coarse, thick powder, which is the most to be recommended for its medicinal powers, is more than the enfeebled stomach oftentimes can bear.

These objections, however, do not militate against the employment of the compound tincture, particularly if given with a little port wine, or combined with an effervescing draught, made of the sesquicarbonate of ammonia, or the bicarbonate of potash and lemon juice. It is in this state exceedingly grateful to the patient in the dose of a drachm, three times repeated in the course of the day, or smaller doses may be given at shorter intervals, according to the state of the individual; if you have, however, any reason to believe that any inflammatory action is going forward in the brain, or its membranes, you must not have recourse to this remedy; it has been generally remarked, that the presence of subsultus tendinum, and convulsive motions of the extremities contraindicate its administration, but that when petechiæ, miliary eruptions, colliquative sweats, muscæ volitantes, and floccitated, are present, it may be given upon a more extensive scale, and with a great degree of vigour and earnestness.

In the very worst cases of small-pox the bark has been universally recognised as an important therapeutic agent; in the ordinary routine of practice in that disease it is not required. As Dr. Mead has observed, it sometimes happens, though not often, that the variolous fever is accompanied with a single or double tertian intermitting fever, in which case the Peruvian bark, or its extract, is to be given at proper intervals, till the paroxysms cease to return; an enema should first be administered. In that variety in which the pustules are interspersed with purple, or black spots, and which was called the bloody small-pox, where sometimes large quantities of blood have been discharged by the urinary canal, at the time of the eruption of the pustules, the Peruvian bark, with sulphuric acid, has been considered to be the most certain remedy. In the present day we seldom find such cases of small-pox as those that are detailed by Sydenham, by Mead, and by other great authorities. During more than twenty years of experience of small-pox, I have seen but one that has come near such striking pictures as have been delineated by some of those masterly writers, whose accuracy we acknowledge, and whose experience we recognise. The disease of small-pox seems to have grown much milder, and the cooling treatment which now so happily is followed by all the medical authorities, must have tended to have rendered it much milder and easier of control. Among the states for which it has obtained a just and well-deserved celebrity, and which gained for it from that great surgeon, Percival Pott, the appellation of a noble medicine, are gangrene and mortification, as he observes,—"Its general power of stopping the one and resisting the other, have made no inconsiderable addition to the chirurgic art." In that well-known essay on the mortification of the toes and feet, in which he describes that particular kind which, beginning at the extremity of one or more of the small toes, passes on to the foot and leg, and, in spite of all the aid of physic and surgery, commonly destroys the patient, and which is often attributed, though unjustly, to the cutting the nails, or a corn, he speaks of the high character of this remedy; he says, "I am sensible that many of my readers will be surprised at my affirming that the Peruvian bark will not stop a mortification, a distemper in which for many years it has been regarded as a specific; but I must beg not to be misunderstood; I mean to confine my observation and my objection to this particular species of mortification, which I regard as being *sui generis*, and under this

restriction I must repeat, that I have seldom, if ever, seen the bark successful; in all other cases, wherein it is used, or recommended, no man has a higher opinion of it, but in this I cannot give it a praise which it does not deserve."

John Hunter has, in his observations on the mortification preceded by inflammation, observed, that bark is the only medicine that can be depended upon, as it increases the powers of the system and strengthens the constitution, while it lessens the action. The first employment, for these states, is ascribed to Sir Hans Sloane, but the individual who gave to the public an early account of this practice was Rushworth, in a work entitled "A Proposal for the Improvement of Surgery;" he seemed, however, only to have been aware of its value in the gangrene attendant upon intermittent fever. Douglas, Amyaud, Alexander Monro, Kirkland, in England, Van Swieten, De Haen, Haller, in Germany, have supported, in their writings, those who have advocated the use of the bark. From Hennen's "Military Surgery," it would appear that the surgeons, during the Peninsular campaign, placed less reliance upon it than the practical men who had preceded them.

There are some practitioners who, since the days of Dr. Haygarth, employ this as a remedy in rheumatism, even in its acute form, as soon as any sediment is apparent in the urinary fluid. Sydenham believed that it was capable of producing the disease; to this, probably, he was led from noticing that an intermittent fever is often accompanied by rheumatism, or that those who are subject to an incursion of ague are often liable to the other disease; but, as Fothergill has observed, there are many particulars similar in both; the state of the blood is nearly the same; the colour of the urine, regular exacerbations of pain going off in profuse sweats. There was too great a prejudice amongst the public against the bark; it was said to produce pain in the bones, and hence many individuals were even afraid of using it as a cure for intermittent fever. Even Boerhaave attributed chronic pains to the taking this drug, and many young Englishmen studying at Leyden, were prevented from trying it in the ague fever of the country, from this apprehension. Certain it is that it is a remedy not always to be tried in rheumatic affections without some fear of aggravating them, more especially if any inflammatory action be going forward. Cullen has seen exacerbations occur when he commenced the bark, after the fever had declined, and was obliged to recur to the use of antiphlogistic and diaphoretic remedies. In scrofulous disorders bark has been very highly lauded; Dr. Fothergill has recorded many instances of its success; he gave it to children of both sexes, and of different ages, in various conditions of life, and found manifest advantage from it. In incipient glandular tumours, in swelled lips, cutaneous blotches, and where there was a tendency to a strumous habit, he employed it with considerable advantage. His first attempts afforded him sufficient encouragement to proceed. Fordyce also found its value in affections of the mammæ, of the parotids; Whytt likewise joins in its praise in similar states.

In the latter stages of dysentery, where there is a tendency to gangrene of the intestines, it has been recommended, but it rarely answers the expectations that are excited. Morton has called bark an Herculean remedy, and an antidote to hæmoptysis, depending on a peculiar state of the blood, which, he believes, lays the foundation for phthisis; but we have in no instances been fortunate enough to find the same benefits resulting from it. Hoffman and others gave it a trial, but certainly not in as many cases as might be satisfactory. In hæmorrhages which are dependant upon certain conditions of the body, by which a tendency to decomposition is marked, cinchona is valuable. In mænorrhagia it has been employed, but it is a dangerous remedy where this occurs from plethora, or in that scirrhous state which precedes cancer of the womb. Where it arises in delicate, nervous females, of irritable constitution, when it is periodic, and where no febrile symptoms are developed, bark with sulphuric acid, may most successfully be given. It requires, under such circumstances, that its use be persevered in, and that a generous diet may, at the same time, be allowed. It then seems, while it exerts an action upon the blood vessels, by retarding their inordinate action, to give a general tone and strength to the whole frame. In epilepsy, in hysteria, in chorea, when they are periodic, it is a most important remedy; and in these cases it is of some consequence to remember that it should be given at fixed periods, and that these should be observed with the greatest nicety; indeed, no drug more requires attention as to the precise time at which it is to be taken into the stomach; hence, in public establishments, where due attention can be afforded to regularity, this medicine so much more generally succeeds in producing effects than in private practice.

As an anthelmintic the bark has been employed with some success, more particularly in the remittent fever of childhood that is caused by the irritation of worms in the intestinal canal. A verminous epidemic has been noticed by some of the Italian writers, amongst whom is Rammazani, and in these cases, this remedy has been tried; Lanzonio, Torti, have also noticed this subject. It has sometimes been found that children will not be induced to take any preparation of bark on account of its bitter-

ness; in such instances, enemas have been employed, made of the decoction, and likewise cataplasms have been made with the powder and decoction, and laid over the region of the stomach with a very beneficial influence. Brera, and some of the Italian physicians, have tried another plan,—they have triturated a moistened extract of bark with the saliva, and with honey, and have applied it by frictions to the thighs, and to different parts of the body, until absorption has taken place; and the consequence has been that disease has been cured, and more especially where any intermittent type was present. Some expectations were at one time formed of its utility as a pediluvium; but, after some very fair trials, it was abandoned as useless. The decoction and the tincture of bark have both claims to our attention for the purpose of regulating the bowels, and giving that periodicity of action which is often essential to health; and it has been observed that even where constipation has habitually existed, by a due course of the medicine, more particularly when combined with an infusion of senna, the use of purgatives will be rendered unnecessary. An ounce and a half of decoction of bark, with half an ounce of the senna infusion, to which a few drops of compound spirits of lavender, or a drachm of tincture of cardamoms may be added, persevered in daily for three or four weeks, frequently leaves behind it the best effects in cases of constipation dependent either upon a deficient secretion of the mucous membranes of the intestines, or a sluggishness of the muscular fibre by which the peristaltic action is retarded. In the termination of almost all acute diseases bark will be found very serviceable; in diseases of debility, and in very many states in which a general debility is the marked disorder. It should, however, be avoided where the skin is parched, and has little or no tendency to excretion, where the tongue is dry and brown; where there is much thirst complained of; where there is a tendency to cerebral excitement; if the urine be high-coloured, if the pulse be quick, if the excretions by the bowels are of a slimy character; in the remittent fevers which are dependent upon undue accumulation in the intestinal canal, it is to be avoided. It may be combined beneficially in some cases with rhubarb, or aloes, and aromatics are generally required to cover its bitterness; while, in hysteric patients, its union with musk, with valerian, or camphor, may be prescribed. The other barks may be given with it in disorders of the nervous system; and it is ordered with wine, with opium, with camphor, with much advantage, in the greatest states of depression of the nervous powers.

Cinchona bark has been submitted to various investigations in the laboratories of the chemists, and the results of the different analyses have afforded to us additional instruments in the healing art. The labours of the earlier inquirers threw but very little light on any of the important principles which have of late years been made known to us. The first attempts that were made to ascertain the nature of the drug, were by Neumann, Cartheuser, Geoffroy, and other ingenious men, but it was not until Laubert, Streuss, of Moscow, and Gomez, of Lisbon, published, some few years since, their experiments, that the discovery of cinchonia and of quinine was made.

To Dr. Duncan, of Edinburgh, is to be attributed our knowledge of cinchonine, or, as it is now called, cinchonia, as a distinct vegetable principle, which was found by Messrs. Pelletier and Caventon in the cinchona condaminea, united with kinic acid, forming two per cent. of the whole bark; while in the yellow bark an alkali, though in some respects resembling cinchonine, yet differing from it in certain properties, was observed, which they denominated quinine, and which, in our new Pharmacopœia, is called quina.

It appears that in pale bark there exists acidulous kinate of cinchonine, a green fatty matter, which has been called red cinchoninine, tannin, which turns iron of a green colour, a yellow colouring matter, fecula, woody fibre, and kinate of lime. In yellow bark exists quinine, which differs from cinchonine in being very soluble in ether, and forming salts which are essentially different from those which are formed by the union of cinchonine with acids; the quinine forms about 0.9 per cent. of the bark, and there is very little cinchonia; there is an acidulous kinate of quinine, besides red cinchonine, tannin, yellow colouring matter, fecula, woody fibre, and kinate of lime. The red bark holds acidulous kinate of cinchonia, kinate of quinine, reddish matter, red cinchonine, tannin, kinate of lime, yellow colouring matter, starch, and woody fibre.

From this you may judge that yellow bark, or cinchona cordifolia, chiefly contains quina; the cinchona lancifolia, or pale bark, cinchonia; whilst the red bark, or cinchona oblongifolia, contains both these substances. To Nature's acid, which is in union with these alkaline bases, the denomination of kinic acid has been applied. The process by which quina is obtained is very simple, and is contained in the formula of the Pharmacopœia which prescribes the mode by which the disulphate of quinine is to be prepared. It directs us to take seven pounds of bruised heart-leaved cinchona, nine ounces of sulphuric acid, two ounces of purified animal charcoal, of hydrated oxide of lead, of solution of ammonia, and of distilled water, each as much as may be sufficient. Mix four ounces and two drachms of sulphuric acid, with six gallons of dis-

tilled water, and add the cinchona to them; boil for an hour and strain. In the same manner again boil what remains in water and acid, mixed in the same proportions, for an hour; lastly, boil the cinchona in eight gallons of distilled water for three hours, and strain; wash what remains frequently with boiling distilled water. To the mixed liquors add oxide of lead, whilst moist, nearly to saturation. Pour off the supernatant liquor, and wash what is thrown down with distilled water. Boil the liquors for a quarter of an hour and strain, then gradually add solution of ammonia to precipitate the quina. Wash this until nothing alkaline is perceptible. Let what remains be saturated with the rest of the sulphuric acid diluted; afterwards digest with two ounces of animal charcoal and strain. Lastly, the charcoal being thoroughly washed, evaporate the liquor cautiously, that crystals may be produced.

The action that takes place is easily understood, and I will make use of the words employed by Mr. Phillips to explain it, for, with his usual perspicuity and clearness, he well illustrates the subject. The quina exists in combination with the kinic acid, forming with it kinate of quina, which is soluble to a certain extent in water, and is rendered more so by the sulphuric acid employed in the process, and perhaps by decomposing it. Whatever may be the state of combination, the solution contains sulphuric acid, kinic acid, and quina, mixed with extractive and colouring matter, the latter being got rid of by the animal charcoal. On adding oxide of lead the sulphuric acid combines with it, and the resulting sulphate being insoluble is precipitated, while the kinic acid and quina remain in solution. When ammonia is added, after the separation of the sulphate of lead, the kinic acid unites with it, and the kinate of ammonia formed is soluble, while the quina is precipitated, and this, when afterwards combined with sulphuric acid, forms disulphate of quina, which crystallises. Quina is white, inodorous, very bitter to the taste, almost insoluble in water, soluble in alcohol and ether; in its pure state it is seldom used in medicine. The disulphate of quina, which is composed of one equivalent of sulphuric acid and two equivalents of bark, is a white pulverulent substance; its crystals are acicular and effloresce when exposed to the action of the air, and are distinguished for their pearly lustre; it is not very soluble in water, one part requiring about 740 parts of cold, and 30 of boiling, water for its solution. That which has been prepared in Paris by MM. Pelletier and Caventon has been preferred, but different specimens of great purity have been exhibited at the *Medico-Botanical Society*, and one manufactured in this country by Messrs. Herring is very much esteemed. It is frequently adulterated with starch, with pipe-clay, and various other ingredients have been added to it. There is a preparation said to have found its way into the market which was formed of spermaceti, of starch, and of gentian; this, when carefully made, has worn the appearance of the disulphate of quina, but is perfectly valueless, and is of course sold at a very low price. The simple process of heating it, is sufficient to detect the imposition; if it turn black, starch is present. Another test is the solution of the suspected powder in infusion of roses; if it be pure, the solution will be perfect, if not, there will be a curdy flocculent mixture formed. Cinchonia is white, its crystals are semitransparent, and are generally obtained in the form of small needles; it is only soluble in 700 parts of water, and hence it has but little taste; boiling alcohol dissolves it more abundantly, and then it has a powerful bitter flavour. The sulphate and the acetate of cinchonia have been employed in France, but as the yellow bark is more easily procured, the quina is cheaper, and is found to be quite as useful in medicine. The sulphate of cinchonia is, however, very soluble in water; the acetate requires an excess of acid to render its solution easy. I must not pass over in silence the preparation of bark called liquor cinchonæ cordifoliæ of Mr. Battley, which has been found very efficacious, and a most serviceable concentration of the bark. He has tried his experiments on a very large scale, and has given reports of them to the public. He has been eminently successful in applying a principle which is well worthy the attention of the chemist. He believes that a large proportion of vegetable substances yield up all their medicinal virtues to water, and to attain this end he macerates for a length of time in distilled water, at the temperature of the laboratory, opium, aloes, rhubarb, senna, sarza, and bark, taking great care that the ingredients are not disturbed during the process, and avoiding the acting upon very large masses. In Dr. Farre's "Journal of Morbid Anatomy" you will find a detail of his experiments on yellow bark, and these I have had an opportunity of witnessing in his laboratory, where, with great liberality, all the profession are admitted. He has designated his medicine liquor cinchonæ cordifoliæ, and it certainly is a concentration of all the essential properties with the aroma of bark, and may be very fairly considered as a useful production of pharmaceutical art.

In the liquor cinchonæ the quina exists, combined with the acid, which Nature has, in her own laboratory, formed, and I firmly believe that it is more efficient than is the sulphuric acid generally united with quina. Mr. Battley has given to the medical profession the reasons that induced him to make this preparation, and they are, to me, of much importance. I should earnestly

recommend the liquor cinchonæ in almost every instance in which quina has been employed. The cinchonic red, the oily matter, the gum, the ligneous fibre, and the soluble colouring matter of the bark, cannot, certainly, be regarded as any portion of the active principle, nor can the tannin, on which formerly much stress was laid, for many barks abound much more in this principle, still they oftentimes appear to be necessary to the due action of the drug. This may arise from the stomach not being prepared to work upon the concentrated salt, which is oftentimes found, more particularly where the powers of the digestive organs are impaired, to pass away from the intestinal canal unchanged. Another great objection to the use of quina, is its production of a remarkable affection of the head; in some cases vertigo, tinnitus aurium, mental delusions, flushed face, bleeding at the nose, and a variety of symptoms which have been recognised by some medical writers under the name of "Quininism." We learn from the "Calcutta Transactions," that when, in the year 1829, a fever broke out at Jubbulpore, the quinine was very successfully administered for the cure of the disease, but every individual suffered more or less from an affection of the head. In one officer, it caused transient deafness; in another, vertigo; in a third, intolerance of light to such a degree that fears were entertained lest an effusion on the brain should occur. A European was attacked, for a short time, with unwonted feelings, and great confusion of ideas, while all sorts of chimeras passed through his mind. A Portuguese suffered from tinnitus aurium and deafness. In many cases this cerebral excitement has been the result of the very large doses that have been employed, and no remedy has had such a wide range of dose; from one grain to ten grains has been given at once; and occasionally, the most inconvenient, if not dangerous symptoms, have been developed from small quantities. It is difficult to state what is to be considered as an equivalent dose of quina to the bark; it has been usually calculated that a grain, or a grain and a half, equals a drachm of the bark. In Italy, where very large doses of the cinchona are given, the sulphate of quina has been found to be required in larger quantities than the bark would be given. Dr. Martinet, who practises at Miglarino, a marshy plain near Pisa, has been obliged to give thirty-five grains repeatedly in the intervals of fever, without producing any bad effect; but the general report of the power of the quina in Italy is favourable. You may judge of its importance there, when the daily average of the consumption of bark, at the *Hospital of the Holy Ghost*, in Rome, amounts to about fifty pounds. This hospital has generally a large number of cases of intermittent fever. In Rome and its environs the quantity of bark consumed, in one year only, was ten thousand two hundred pounds. The sulphate of quina was speedily introduced into this country, and the names of Magendie, of Chomel, Villermé, Van Maanen, were sufficient authorities for its reception. Dr. Elliotson, Dr. Dickson, Dr. Barker, and other cultivators of medical science, quickly gave us the result of their experience; and it was generally acknowledged that it was to be prescribed in the greater number of cases in which bark had been previously used, and that many advantages attended its employment; that a large quantity of inert matter was avoided; that it could be given with great convenience on account of its small bulk; that where, from gastric irritability, large quantities of bark would be ejected, that it might be taken in sufficient doses to arrest disease. At the same time, there were great objections offered to its indiscriminate use, and the papers of Dr. Menard and Dr. Desportes, in the "Revue Medicale," proved that it was not a remedy to be trifled with. For a time, like every new medicine, it was tried in every case that occurred, and no prescription issued from the pen of some of the learned of the faculty, that did not bear, as a prominent ingredient, the new French medicine. It has again fallen into some neglect, and been little regarded by the novelty hunters. The judicious medical man, however, knows that it is a most valuable agent; that it is an energetic tonic, a certain febrifuge; it may be likewise used endermically, for placed after a blister has denuded a surface upon the limb, it arrests the progress of intermittent fever. It may likewise be used with singular benefit, as a snuff, in the cure of intermittent neuralgia. This Dr. Richat, of Strasburg, first pointed out, and experience has since confirmed it: one grain of powdered quinine, with two of common snuff, introduced into the nostril, has been found to act as a charm. Four cases of facial neuralgia, which long resisted all common treatment, yielded to a single administration of this remedy.

DR. HACHMANN ON THYMIC ASTHMA.

We have already published two interesting Memoirs on Thymic Asthma; the following by Dr. Hachmann, which we abridge from "Dieffenbach's Zeitschrift," No. 7, 1837, will serve as a complement to the researches heretofore made in this interesting disease.

The author commences, as, indeed, most German writers do, with an historical

sketch of the malady, and then enters immediately on its description.

Infantile, or thymic asthma generally commences in so gentle and insidious a manner that the child's attendants, unless very careful, overlook the first accesses.

These manifest themselves in the following manner. The child suddenly awakens with a peculiar piping cry, which has some resemblance to the suffocative inspiration of hooping-cough, but is much shorter, and disappears again instantaneously. If the child be examined closely it will be found that his respiration is suspended during the access, or that he makes violent efforts to draw in the air through the narrowed glottis, a circumstance which produces the peculiar tone. The face also is moderately flushed; the eyes glassy; the child lies for a few seconds, as if overwhelmed with terror and then emits a short low cry. The access has now terminated, and the recovery from it is prompt. The breathing quickly assumes its normal character, and the infant takes to the breast with avidity; the pulse and temperature of the skin are now quite natural; there is no cough; in a word, the child appears perfectly healthy. At first the accesses commonly occur during sleep, and appear at lengthened intervals, according as the disease is more or less acute; they gradually, however, occur more frequently during the day, especially when the infant is vexed, coughs, cries, or endeavours to drink. The respiration is now suddenly suspended; the face becomes of a dark-red colour, and fixed appearance, the body stiff, the fingers contracted; the child draws several short, crowing inspirations through the narrowed glottis, and the fit terminates with acute cries. The secondary effects of the accesses now begin to manifest themselves; after each fit the infant, instead of quickly recovering, as formerly, lies in a stupid, sleepy state, for some time; the fæces and urine pass away involuntarily. As the disease advances, the fits become more numerous, and in one case, where the mother watched narrowly every movement of her child, I have counted as many as fifty in a single day. In this acute stage of the disease the respiration is totally suspended after one or more short, crowing inspirations; the whole body is affected with tetanic convulsion; the arms are stiff, and the fingers strongly flexed on the palms of the hands; the face is expressive of the highest degree of suffering, and the complexion changes rapidly from red to blue. These accesses come on suddenly, without any prodromes, and disappear in a minute or two.

More frequently, however, they change into what Caspari has designated the second stage of the disease. The affection which has hitherto been confined to the branches of the par vagum, now extends to the brain and spinal marrow. To the symptoms already described of spasm of the glottis, are joined general convulsions. The little patient is now also attacked by accesses of asthma, which commence with the peculiar symptoms just noticed, but soon terminate in convulsions which it is impossible to distinguish from the ordinary convulsions attacking children. The scene is thus changed, and the patient exhibits the effects of the disease after the disappearance of the access; he lies dull and immoveable in bed, with violent fever, and a hard quick pulse; the skin is often covered with a profuse perspiration; he slumbers continually in a disturbed sleep, with half-closed eyes. The disease has now reached its acme, and soon terminates either in death or in convalescence. In the latter case the fits of asthma and convulsions gradually decline, the fever is mitigated, the sleep more calm, the general convulsions no longer seize the child, who begins to recover its appetite; the breathing daily becomes more free, and is commonly restored to its normal condition in the course of a week.

The duration of the stage of convalescence varies according to the age and condition of the child attacked, its constitution, &c.

When the disease is to terminate fatally, the accesses of asthma and convulsion are repeated at shorter intervals, the fever becomes more violent, the pulse very quick, small, and contracted; the child's body is constantly covered with sweat, and it sinks at last in a state of exhaustion or coma.

The duration of the whole disease is various. According to Caspari the first stage may last from six to eight weeks; from my own experience I should say that it varies from eight days to four or six weeks, or even three and four months. The duration of the second stage is, of course, shorter, and seldom exceeds fourteen days; so that, as a general rule, we may say that the complaint seldom terminates before six or ten weeks.

Amongst the most remarkable and constant of the symptoms of this disease, Kopp mentions the protrusion of the tongue between the gums, but I have not remarked its existence in all the cases which fell under my notice.

The pathological anatomy of thymic asthma has been variously described by different writers. Kopp found the thymic body enlarged in every case, but sound in structure; the lungs were of a brown-red colour, and highly-congested, the heart soft, its foramen ovale open.

Eck also found hypertrophy of the thymus gland, which compressed the subjacent lungs; the brain, lungs, and respiratory apparatus appeared normal; the heart was healthy, but its right ventricle appeared soft and collapsed.

Dr. Velsen has likewise found the thymus gland remarkably large, extending to the extremity of the sternum, four inches long, and weighing an ounce, but sound in structure.

Rullman found the brain congested; the larynx and air-tubes in a normal state; the thymus sound, but enlarged; the lungs and right side of the heart filled with blood.

In a case mentioned by Kornmaul, the enlarged thymus weighed 840 grains; the lungs and heart were healthy; the foramen ovale open.

Brück and Pitschaft have likewise found the thymus gland enlarged.

In a case observed by Caspari the spinal marrow was pale and firm; the membranes sound; the sinuses of the brain full of dark fluid blood; the substance of that organ excessively softened; the phrenic nerve harder than in the normal state; the vagus softened like the brain; the lungs emphysematous and crepitant; the trachea and bronchi of a dark-red colour; the thymus gland of a round shape, and nearly as large as a hen's egg.

On the other hand, Pagenstecher found the organs contained in the region of the neck in a normal condition; the thymus gland, in other respects natural, weighed only 102 grains; the lungs were healthy; the heart enlarged, and the right ventricle, as well as the principal veins, were much distended with blood.

Marsh has observed similar appearances in two cases. In the first the abdominal and thoracic viscera were healthy, as also was the lining membrane of the larynx, trachea, and bronchi; the ventricles of the brain were full of fluid. In the second there was considerable congestion of the brain, which was healthy in structure; the uvula was elongated; the tonsils slightly enlarged; the glottis extremely narrowed, but its lining membrane, together with that of the air-passages, normal; the lungs and right side of the heart filled with blood. On examining the glottis the following day it was found to have recovered its natural diameters. In two cases mentioned by Pagenstecher, the chordæ vocales, and in one the epiglottis, were excessively softened. The post-mortem examinations made by Dr. Ley, led him to conclude that enlargement of the cervical and bronchial glands constituted a principal element of the disease. This circumstance has been alluded to by P. J. Frank, who says, "in asthmate, ut nominant, puerili, glandulas bronchiales preter sanitatis modum, maxime, vero thymum insigniter tumefactum invenerunt anatomici."

From the preceding sketch of the morbid anatomy of this disease, it follows that no constant change in the respiratory organs, or brain and nervous system, has as yet been discovered to explain the cause of infantile asthma.

Although the symptoms of this asthma are so peculiar and constant, that it can with difficulty be mistaken for any other complaint, yet there are a few which have been confounded with it by superficial observers.

1. Cyanosis. This disease is to be distinguished from thymic asthma by the following symptoms:—First. Cyanosis is commonly a congenital disease, and is developed within the first week after birth, whereas infantile asthma attacks children who were before perfectly healthy, at the period of dentition, about the fourth, fifth, or seventh month, or even later. Second. The fits of suffocation which occur in cyanosis are longer, commonly accompanied by cough, during which the whole body of the child becomes blue.

In infantile asthma the paroxysm is momentary, and consists generally of from six to eight fits of crowing inspiration, without any cough, or blueness of the face; in the more acute cases the respiration is totally suspended for a few seconds, a phenomenon not observed in cyanosis; finally, in this latter disease the remissions which characterise infantile asthma are not observed.

2. With *laryngitis* the disease in question has nothing common, except the fits of suffocation; it is distinguished from laryngitis by the absence of acute febrile symptoms; of the croupy cough and dyspnœa. Croup is a highly acute disease, whereas infantile asthma is commonly protracted to several weeks.

3. I have never had occasion to observe Millar's asthma, and cannot, therefore, speak from experience of the differences between it and thymic asthma.

4. The diagnosis of the latter disease, however, becomes more difficult when it has passed to the second stage, with general convulsions, febrile heat of the skin, and acceleration of the pulse, &c. Here it bears much resemblance to hydrocephalus, and we can hence understand why some of the English physicians, Clarke in particular, have placed the seat of the disease in the brain, and denominated it cerebral croup. The history of the two complaints, if accurately obtained, will enable the practitioner to distinguish between them. In infantile asthma the symptoms of the congestive and inflammatory stages, peculiar to hydrocephalus, are necessarily absent. The convulsions in this latter affection are accompanied with coma, partial paralysis, and amaurosis. In asthma, on the contrary, the functions are, in a great measure, recovered during the intervals of the fits.

The opinions which have been delivered by authors concerning the ætiology of this disease, are very various, some referring it to organic, others to functional derangement. Kopp was led, as a result of the post-mortem examinations which he made,

to consider enlargement of the thymus gland as the cause of infantile asthma, by interrupting the circulation through the heart and lungs; several other physicians, Rullman, Velsen, Pitschaft, and Montgomery, are of the same opinion. This view is, however, founded on a limited number of observations; besides, in a number of cases no abnormal change of the thymus gland has been discovered; on the contrary, Pagenstecher describes the case of a child in whom the gland, instead of weighing 160 to 180 grains, as it usually does, did not weigh more than 102. The hypertrophy of the gland must, therefore, be considered as a co-existing lesion, and not as the cause of thymus asthma; indeed, it is more probably a consequence of the affection. There are several cases on record in which the gland is described as being much enlarged, without having produced any disturbance of the respiratory apparatus.

The next theory to be noticed is that which attributes the symptoms of thymic asthma to spasm of the glottis. This theory has been chiefly adopted by the English physicians, as Clarke, Marsh, Newton, North, and Robertson; in Germany its chief supporters are Caspari, Pagenstecher, and Rösch. The period at which the disease usually commences, viz., that of dentition, is a point in the history of the affection which is well worthy of attention. Hüfeland, and other German writers, have shown the great influence of developmentary changes in infancy, in the production of disease, and the facts which they have brought to light, induce me to consider infantile asthma as a nervous disorder, dependant on the development of the subject in which it occurs.

Infantile asthma generally makes its appearance at the period of the first dentition, or about the fifth, seventh, or eighth month; it may occur later, but I have never seen it in the third year; and it certainly attacks children within the first year more frequently than those who are more than twelve months of age. Strong and well-formed children are as often attacked as the weakly, but scrofulous and rachitic children appear to me to be predisposed to this affection beyond all others.

The prognosis is not a favourable one,—all physicians are agreed that infantile asthma is a highly dangerous affection. North, indeed, affirms, that he has not lost a single patient by it; on the other hand, of eighteen cases treated by Pagenstecher, eleven died during the paroxysms; two of secondary affections, while only five recovered. Of sixteen cases which fell under my observation, only two died; the remaining thirteen recovered.

The treatment of thymic asthma will naturally depend on the view which may be taken of the nature of the disease.

Kopp recommends small doses of calomel continued for a considerable length of time, as the chief remedy in this disease; next in importance to calomel, he advises the use of small doses of ipecacuanha, æthiop's mineral, extract of cicuta, and, when general convulsions set in, the ammoniated copper; he also establishes an issue over the region of the sternum, and keeps it open for a length of time. Caspari, who distinguishes infantile asthma into two forms, the catarrhal and the spasmodic, employs the antiphlogistic method in the treatment of the first species; a few leeches to the chest, four grains of calomel a day, and irritants applied to the integuments of the chest, or occiput, he has found to be extremely useful. When the convulsive attacks are very severe, he gives four grains of musk; should anything approaching to coma supervene, he places a few leeches on the head, or along the spine, and joins assafœtida to the musk. The convulsive species is, according to his experience, as difficult to treat as confirmed epilepsy.

Pagenstecher regards the regulation of the nutritive functions as the first and most important indication; for this purpose, when the child is strong, he endeavours to produce derivation to the intestinal canal, by means of calomel; as a specific against the accesses of convulsion, he places the greatest reliance on the hydrocyanite of zinc, in doses of one half to one grain, continued from four to six days.

Roesch recommends antispasmodics in general, and particularly digitalis; North, calomel; Marsh advises a change of air, gentle tonics, with antispasmodics according to circumstances, enemata of the infusion of tobacco, &c.

My method of treating the disease is extremely simple; but although it has been much more successful than that of any of my predecessors, I cannot venture to ascribe its results to the nature of the treatment alone. In the first stage of the disease, when the fits appear to consist merely in spasm of the glottis, I give the flowers of zinc, with extract of lettuce, and small doses of ipecacuanha, three or four times a day. When the children are strong and lusty, I add small doses of calomel; but when any appearance of a nervous temperament exists, I do not order calomel; should any disorder of the digestive organs appear to be present, I administer a laxative of rhubarb with carbonate of soda, and if the air-passages seem obstructed with mucus, I have found a gentle emetic of benefit. In cases of children, of evidently scrofulous habit, or for such as are weakly, ill-nourished, &c., I combine the remedies already mentioned, with small quantities of the carbonate of iron; here the diet must be regulated with the greatest care; the food should be light,

simple, and of easy digestion, and exercise in mild, fresh air, is of the greatest value.

When the physician has an opportunity of treating the disease at an early stage, the use of the remedies just indicated, will produce a remission of the fits, which gradually decline and disappear; great attention, however, must be paid at each period of development, and especially at the cutting of new teeth, when the accesses are apt to recur.

Sometimes the malady has made a very rapid progress, or is of long duration, before the physician has been called in; the children labour under general convulsions, and febrile symptoms, of greater or less intensity, have made their appearance. Under such circumstances a few leeches should immediately be applied to the head, and some mild cooling powders administered internally so as to produce one or two motions daily.

The asthmatic and general convulsive attacks are to be combatted by powerful antispasmodics, of which I have found the most efficacious to be musk, combined, according to circumstances, with flowers of zinc, calomel, digitalis, or camphor; these may be aided by enemata containing vinegar, or assafœtida, or, according to the advice of the English physicians, infusion of tobacco. As the fits become lighter, these means may be gradually discontinued, but it will be well to go on with the use of the musk in diminished doses for some time longer. The best strengthener, during the period of convalescence, is free exposure to mild and fresh air.

The exclusive antiphlogistic treatment seems to me to be contraindicated by the temperament of the children in whom infantile asthma generally occurs; it has never produced any benefit in my hands, nor do I consider the use of what are called antiscrofulous remedies, of greater value, unless combined with the antispasmodics already mentioned, than which hyosciamus, belladonna, and the sulphuret of potass, appear to be much less efficacious.—*Abridged from Dieffenbach's Zeitsch.*, No. 7, 1837.

Inhaling Silver.—It is said in one of the French papers, and professedly from "Professor Silliman's Journal," that on opening the mules, after death, which have been employed within the Mexican mines, from two to five pounds of silver are often found in their stomachs, and that he has several specimens of it in his possession, the metal being perfectly white and pure. [Query—Was the silver really introduced through the economy, or forced into the stomach of the animal for a fraudulent purpose. —Ed. L.]

NOTES ON THE STATE OF THE CONTINENTAL MILITARY HOSPITALS.

To the Editor of The Lancet.

Sir:—The following notes on the state of the Continental Military Hospitals, taken during a late tour, are much at your service, should they be deemed suited for insertion in your widely-circulated Journal. I am, Sir, your most obedient servant,

Louth, Dec. 12, 1837. M.D.

1. HOSPITALS IN BELGIUM.

GHENT.

The *Military Hospital* of this city was formerly a convent, having been converted to its present use by Napoleon: the refectory, dormitory, and other large rooms, form the wards, while the lesser ones are converted into offices and apartments for the resident medical officers. Attached to the service of the hospital is a physician, surgeon-major, and three assistant-surgeons; of the latter one is always on guard for the admission of patients. The number of inmates is 600, but 1000 can be accommodated. The wards are—

1. For severe wounds.
2. For slight wounds.
3. For ophthalmia.
4. For syphilis.
5. For intermittent and continued fevers.
6. For small-pox.
7 and 8. For convalescents.

In the ward for severe wounds were two cases in which amputation of the arm had been performed, and union by the first intention was proceeding favourably; it is only lately that this process has been adopted here in amputations, union by granulations having been considered as less liable to the supervention of nervous or inflammatory accidents. To a compound fracture of the leg, which was going on favourably, the "appareil immobile" of Baron Larrey was applied. Four cases of variola had been treated by extensive general bleeding, with the best effect; the surgeon said that he had prevented marks on the face of one of these men by keeping it constantly covered with lint, spread with cerate, he having observed that marks rarely occur on those parts of the body which are not exposed.* Intermittents

* Was it by a similar method that our earliest English medical author, John of Gaddesden, the court physician, prevented the marking of the son of Edward II., in 1320, who says,—"Immediately after the eruption of small-pox, cause the *whole body* of your patient to be wrapped in scarlet cloth, or in any other red cloth, and com-

are treated by a single dose of quinine, from twenty to thirty grains, given four hours before the accession of the cold stage. A medical officer from Aix-la-Chapelle had recently visited the hospital, who said that in most cases of intermittent fever, there is pain felt on pressing the spinous processes of the cervical vertebræ during the apyrexial period; and that the duration and obstinacy of the affection may be judged of by the greater or less extent of this pain. In the venereal ward, the cases are treated, on admission, by antiphlogistics, and if these fail the bichloride of mercury is given. Gonorrhœa is treated by cubebs and copaiba; gonorrhœal ophthalmia by blisters to the back of the neck, without any attempt to restore the urethral discharge. Most of the ophthalmic cases were strumous, and were treated by local depletion, low diet, and stimulant collyria, where the conjunctiva was injected. The convalescents are placed in two large, well-ventilated wards, at the upper part of the building, and, when the weather admits, are allowed to walk out in the court.

ANTWERP.

The *Military Hospital*, which was formerly a convent, is ill-situated in a densely inhabited part of the city. The number of inmates is 250, but it can accommodate 600. The wards are large, containing upwards of 60 beds each. In the ward for small-pox were four cases in which no medical treatment had been pursued; the surgeon said that neither bleeding, nor any other remedy, was used in such cases, and that of thirty cases of variola treated this year, he had lost but two, which he seemed to consider as a very favourable result, and the best argument that he could adduce in support of his "médicine expectante;" no means are used to prevent marks, as he said it was immaterial whether "les militaires etaient des jolis ou des vilains garçons." There were many cases of intermittent in the fever wards; two grains of quinine are given every hour during the intermissions, until sixteen grains have been taken, and this generally arrests the disease; after which the patient is kept three weeks in hospital; no preparation of arsenic is ever given in these cases. Mercury is given in syphilis only when constitutional symptoms appear; gonorrhœa is generally cured in three days, by a daily injection, per anum, of half an ounce of balsam of copaiba, ten drops of tincture of opium, and six ounces of infusion of althæa. The ward in which men with scrofulous ophthalmia (a very frequent affection in Belgium), are placed is very close, dark, and ill-ventilated, under the impression that fresh air is injurious in such cases: leeches are applied around the eye, and bleeding from the arm is practised in all cases of acute inflammation of the conjunctiva: this is never carried *ad syncopen*, nor is the patient kept erect while it is practised, but about eight ounces are abstracted from time to time. Cases of chronic ophthalmia are generally found to require invaliding, since any extra duty subjects the patient to a fresh attack of acute inflammation.

MECHLIN.

The *Military Hospital* of this city, which was formerly a convent, was converted to its present use at the Revolution of 1830; an arcade occupies part of the lower story of the building, which forms a sheltered walk for convalescents when the weather does not admit of their going into the hospital garden. The number of inmates is 150, but it can receive 600. The ward of strumous ophthalmics is partially darkened; the general treatment is repeated bleeding from the arm; chemosis had taken place in one of the cases. When men are received into hospital with syphilitic sores, or sores having a syphilitic character, some matter is taken from the ulcerated surface on the point of the lancet, and introduced under the skin on the back of the hand; if the sore be venereal, a chancre will be thereby produced on the hand in less than seven days; the bichloride of mercury is then given, under the influence of which the factitious chancre is healed first of the two.*

LOUVAIN.

The building which is at present used as a *Military Hospital*, was formerly one of the colleges attached to the University; it contains 300 patients, but has beds for 500. The wards are large and well ventilated; two in the uppermost story were occupied by 80 ophthalmic patients; many were free from any sign of disease, but it is usual to keep a man in the hospital for some time after he is cured, or relapses would be very frequent. A purulent ophthalmia had lately prevailed, which was highly contagious, since men who had gone to see their friends in the country before they were quite cured, had communicated it to whole families; and during last year nine men had lost their

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mand everything about the bed to be made red; this is an excellent cure. It was in this manner I treated the son of the noble king of England, when he had the small-pox, and I cured him *without leaving any* marks."

* Nearly the same proceeding is adopted by M. Ricord at the *Hôpital du Midi ou des Vénériens*, in Paris; but M. R. introduces the suspected matter at the inside of the thigh, and applies the nitrate of silver to the sore thereby produced. This proceeding is very useful in suspected sores about the lips, &c., and may save many an uncalled-for course of mercury.

sight from it, but none of the medical officers of the hospital had been attacked by it; it was treated by general and local depletion.

BRUSSELS.

The *Military Hospital*, which was formerly a religious establishment, is large, but the wards are small and low, and the ventilation is very imperfect. It contains 60 patients, but has beds for 500. Like the other military hospitals of Belgium, it contains private rooms, and an establishment of baths for sick officers; and the "sous-officiers" are accommodated in wards containing from three to six beds each, fitted up in nearly the same style as the rooms of the superior officers. In some hospitals there is a private garden for the use of the officers.

In the *Civil Hospital of St. Pierre*, fractures, both simple and compound, are treated by the "appareil immobile," cemented with starch. In one case in progress towards a cure, the whole of the fibula had been removed. Inguinal venereal buboes are treated by compression, with much success; a graduated compress is placed above the tumour, confined by a bandage, which is gradually tightened, and the patient kept quiet in bed; by this mode suppuration is prevented in many cases, and in others the absorption of the pus effected.

BRUGES.

The *Military Hospital* is an ancient building, which was formerly a convent. The wards are small and ill-ventilated, from the windows being far from the floor, and no openings being made either in the walls or ceiling; it contains 60 beds. Most of the cases were intermittent fevers, or slight accidents which possessed no interest. The bedsteads are of wood, as in most of the other hospitals of Belgium; but the iron ones have been lately introduced into some few. At the head of each bed is a printed paper, on which is marked the disease, date of admission, &c. of the soldier, and on the other side a list of his effects.

2. HOSPITALS IN PRUSSIA.

AIX-LA-CHAPELLE.

The *Military Hospital*, which was built for this purpose, is capable of containing 120 patients; but, at present, but 60 beds are occupied. The wards are small, each having from five to twelve beds, and are well-ventilated by means of apertures in the floor and ceiling, which can be closed by means of a sliding shutter. The bedsteads are of iron; a black board is affixed to the head of each, on which is written, in chalk, the patient's disease, and the kind of remedies used; this is for the convenience of the surgeon-major, who makes a visit twice daily. Many of the cases were of intermittent fever, which is now common at Aix-la-Chapelle, but has only been met with during the last few years. Fractures are placed in an apparatus suspended from the ceiling, by which the motions of the patient are said not to be imparted to the extremity. Gonorrhœa is treated by low diet, rest, and salines only, which treatment cures in about five or six weeks. The prescriptions are, most of them, from the "Pharmacopœia Militaris Prussica."

COBLENTZ.

The *Military Hospital*, which was formerly a convent, is situate in the centre of the city. It contains 1000 beds, of which but 300 were occupied. The wards are small, containing from 15 to 20 beds each. The ophthalmic ward was darkened, and contained several cases of what the surgeon termed catarrhal inflammation of the conjunctiva, and of "malignant ophthalmia," in which a number of granulations were observed on both palpebræ; these were treated by dropping a strong solution of nitrate of silver, between the eyelids, night and morning.

3. HOSPITAL IN FRANCE.

STRASBOURG.

Here is one of the French *Military Hospitals of Instruction*; the buildings are placed round an oblong square, which is divided into three courts by two ranges of apartments, the upper of which are occupied by sick officers. The ground-floor is commodiously arranged; the two upper stories are divided into fifteen wards, most of them large, containing from 30 to 60 beds. The number of sick was 200, but there is room for 600. The bedsteads are of iron, with a broad plate at the head and foot, on which are placed the medicines, &c. of the sick. The upper stories of the central buildings are appropriated to the use of the sick officers, being divided into rooms which contain one or more beds, according to the rank of the occupants. A clinical lecture is given three times a week, which is attended by the pupils of the hospital, who are 26 in number; there is also a library for their use, which, besides all the standard works on military medicine and surgery, contains all the medical French periodicals; among them the "Journal de Medicine et de Chirurgie Militaires," published under the direction of the Minister of War, a copy of which is sent to every medical officer in the army. Intermittent and remittent fevers, a few cases of ophthalmia, and about fifty of syphilis, formed the greater part of the cases under treatment. The venereal patients are all treated by mercury from the time of their admission.

4. HOSPITALS IN SARDINIA.

NOVARA.

The *Military Hospital* is situate in an open space within the walls of the city. It

was formerly a church, and consists of one large and lofty ward, which formed the central, and of four smaller wards which formed the side aisles. The bedsteads are formed of three planks, supported by iron rests. There were several cases of granulations of the eyelids, which are touched with the sulphate of copper, and afterwards with oil to mitigate its action. Fractures have been successfully treated here, by Professor Pagani, by the plaster of Paris method. The wards were ill-ventilated, and contained 60 beds.

5. HOSPITALS IN TUSCANY.

PISA.

The sick of the regiment stationed here are received into the *Civil Hospital* in the Piazza del Duomo, near the walls of the city, where they are attended by the medical officers attached to the hospital. The wards are three in number, the largest contains 90, and the two smaller each eight beds. There are no stoves allowed in winter, but additional clothing is put on the beds. During ptyalism the men are kept in these wards all the year round, but no accidents have been observed to supervene during a mercurial course, which could be attributed to the low temperature of the apartment. Intermittents are very common among the troops here, owing to the extensive marshes on the side of Pisa.

FLORENCE.

Into the *Hospital of St. Bonifaccio* are received soldiers; those suffering from cutaneous diseases, and lunatics; in all, 1000 beds; of these one ward, containing 80 beds, is appropriated to the military. There were many cases of catarrhal ophthalmia under treatment from a regiment which had marched from Leghorn during the night, to avoid the heat of the day. Gonorrhœa is generally cured in about forty days by antiphlogistic measures only. Cubebs and copaiba have been abandoned since it has been found that they frequently produce vomiting and headach.

6. IN THE PAPAL STATES.

ROME.

The extensive *Hospital of Santo Spirito*, placed on the banks of the Tiber, receives the sick of the garrison, who are placed in the same wards as the other patients, and their treatment is confided to the care of the physicians and surgeons of the civil establishment. The wards are three in number, and are capable of receiving 1200 patients; the beds being placed in double rows on each side of the apartment. Most of the patients were suffering from the effect of malaria, or malignant remittent, in which engorgements of the spleen and liver are very common. Quinine is the usual remedy, and in some cases mercury is given. In the pavement of the wards are the gratings of sewers, into which the patients are in the habit of emptying water, &c.; very little order seemed to be maintained in the hospital; and in every part there was a great want of cleanliness both in the beds and persons of the patients.

BOLOGNA.

Into the *Spedale Maggiore* are received the sick inhabitants of the city, of the Austrian garrison, and of the Swiss troops in the Papal pay, all of whom are attended by the medical practitioners attached to the hospital. Into the *Spedale Clinico*, attached to the *University of Bologna*, are also received sick soldiers. The number of beds is forty, arranged in three small rooms, which are kept in good order. At the head of each bed is a printed paper, which is filled up, so as to give a full account of the state of the patient, remedies employed, &c. The clinical physician makes two daily visits.

7. IN THE AUSTRIAN STATES.

PADUA.

The *Military Hospital*, formerly a large religious establishment, occupies an open space within the walls of the city. The wards are small, containing from four to twenty beds, and, as far as possible, the sick are placed in separate wards, according to the nature of their disease. The number of sick amounted to 260, but there are beds for 500. In one case, in which amputation was about to be performed, a luxation of the tibia backwards upon the femur had taken place, consequent on great disorganisation of the joint; moxas had been used without any good effect. Chancres are cauterised with sulphate of copper, and the bichloride of mercury is given internally; gonorrhœa is generally cured in from three to five days, by copaiba, in the "potion chopart."*

VENICE.

The *Military Hospital*, formerly the convent of St. Chidia, occupies the whole of one of the Venetian islands. Fevers, remittent and intermittent, are very prevalent among the Austrian troops in Venice, during the autumn; but more were observed after the disappearance of the cholera than during any preceding year. They are treated by antiphlogistic remedies, contrary to the usual practice of the physicians of this city. The number of sick amounts to 230.

MILAN.

The *Military Hospital*, formerly the ex-

* ℞ *Peppermint water; Balsam of Copaiba; Aromatic syrup*, aa. ℥ss. *Orange-blossom water; Sweet spirit of nitre*, aa. ℥i. Dose, one ounce.

tensive convent of St. Ambrogio, consists of two quadrangles, inclosing courts. The wards are small, containing from four to six beds; the cells of the former occupants having been employed without any enlargement. In one ward, in bed, were six cases of scorbutus; true sea scurvy is not uncommon among the Austrian troops stationed in Lombardy, particularly those who are in fortresses surrounded by marshy land, as at Mantua. It is treated with the dilute mineral acids, and lotions of cold water to the part, with a full diet; the best effects have been found to follow the use of cherries, in the quantity of half a pound daily. Pellagra is not seen among the troops, although very common among the peasants in the country around Milan. Two rooms are appropriated for the reception of sick officers.

GASTRO-ENTERITE.

To the Editor of THE LANCET.

SIR:—I think you will agree with me that neither French nor English authors and practitioners have paid sufficient attention to the great liability which the mucous membranes of the intestinal canal have to become deranged, when the vital powers are in a weak or depressed state. We are constantly reading of, and observing these affections succeeding causes depressing the powers of mind or body—occurring in the *later* stages of many chronic diseases, and so much so, in the early stage of others, that on this fact Broussais has founded his celebrated theory that fevers take their origin from gastro-enteric inflammation; mistaking, as I believe, the *effect* for the *cause*.

Because causes greatly depressing the vital powers almost always produce these affections; witness the innumerable cases of dyspepsia in the sedentary and nervously-irritable patients. Amongst those badly fed, clothed, &c., as, for instance, in the Millbank Penitentiary some years ago, and in all diseases whose long continuance has produced this depression, phthisis, typhus, diseases of joints, &c.

Their violence varies with the violence or continuance of the depressing cause. In a case of sympathetic fever there is merely functional disorder; mere excitability is not sufficient to produce much effect, but when a fever, either by long continuance, or arising from any narcotic or sedative agent, greatly depresses and weakens the vital powers, then these membranes have a great tendency to become disordered and diseased.

When the vital power is decreased in any other part of the body, that part is more liable to disintegration. Sir J. Earle has narrated some interesting cases showing how liable any part is to assume that state termed inflammation, from slight exciting causes, when the vital power has been diminished from the nervous communication being cut off.

The structure of the mucous membranes, *cæteris paribus*, predisposes them to become affected from this cause before other parts of the body. They are soft and moist, highly organised, and become decomposed in the dead body sooner than other structures. We look upon the vital principle as a power in continual conflict with the physical laws by which our frames are governed, and surely those structures which would become soonest *decomposed* when vitality is *destroyed*, will have a great tendency to *disintegration*, when this principle is depressed.

In early life, when these membranes are in a soft and delicate state, they are peculiarly liable to become disordered; but as we advance in age they undergo an alteration which renders them less susceptible of of disease.—"Dans la-viellesse, les membranes muqueuses deviennent plus denses et perdent leur velouté."—(Bayle and Hollard, "Anatomie Generale," pp. 253.)

I think, Sir, this view of the causes of a very numerous and important class of diseases worthy the attention of your readers. It appears to me to be one of the general principles which, if established, must be of great practical utility in preventing injurious and improper treatment; I therefore request insertion for it in your valuable Journal. I am, Sir, your much obliged and constant reader,

THOMAS WELLS.

Barnsley, Dec. 30, 1837.

HYDRO-SULPHURETTED BATHS.—The beneficial effects of sulphur, in diseases of the skin, are well known to all practitioners. It has also been established, that, when administered in baths, sulphur acts more powerfully than when given under any other form. M. Montain, professor at the *School of Medicine*, of Lyons, has lately composed a substance which is well calculated for the preparation of these baths. The following is the formula which he employs.

Powdered sulphuret of calcium, 8 parts; *Hydrochlorate of soda*, 2 parts; Mix with one part of any cheap vegetable extract;

Isinglass, 1 part. Make up the whole into balls containing about an ounce and a half.

This preparation possesses the advantages of being very cheap, of not emitting any disagreeable odour, or acting on the vessel which may contain the water.

AVERAGE RISK OF LIFE
IN THE
BENGAL CIVIL SERVICE.

To the Editor of THE LANCET.

SIR:—After the valuable and important tables and observations, published in your previous numbers on Vital Statistics, I could hardly expect you to deem the following little analysis of a table, recently published, of the mortality in the Civil Service in India, worthy of observation. Nevertheless I send it in the hope that you may find a corner in your excellent periodical to spare for a subject which would be worthy of greater attention if the data furnished had been more extensive and accurate. The table, from which the following observations are drawn, is one furnished by Mr. H. T. Princeps, Secretary to the Bengal Government, of the risk of life in the Bengal Civil Service, "founded on the actual casualties in the nominations made to that Service, from 1790 to 1836, the first year being computed from the first of January after the year of nomination." The total number of persons who have given a first year to this table on the side of the living, is now very nearly 1000, and from the extreme irregularity which prevails at different ages, and from the increase of mortality caused by the climate, it is evidently too small a number to produce data sufficient for general use. There is some difficulty also in understanding the construction of Mr. Princeps table. That they are not the actual numbers who attained to or died at the different ages, appears from the fact, that in some, fractions are used to express the number living; nor will the deductions from the number living at one age leave the number surviving to the next. For instance, 975 persons are represented as living at the age of 20, of whom 19 died and 2 retired. This would leave 954 alive at the age of 21; whereas, only 933¼ are described as existing together at the beginning of 21. The difference, 20 persons, might have been considered the actual number now existing above 20, and not yet 21, in the service of the Bengal Government, but that the next age proves this supposition to be untenable, for out of the 933¼, 22 die and 8 retire, which would leave but 903¼ surviving to the age of 22, whilst the number stated is 906¼. Without, however, seeking to explain these particulars, I presume the proportion of the living and dying at each age to be correct, and have accordingly constructed therefrom the following table of the probability of a life failing at any particular age before the next, or the proportion of the number dying to a unit of life at each age.

Age.	Probability of Dying.	Age.	Probability of Dying.	Age.	Probability of Dying.	Age.	Probability of Dying.
20	.019487	30	.011009	40	.037478	50	.045197
21	.023567	31	.026949	41	.037037	51	.014814
22	.019856	32	.016359	42	.041841	52	.052173
23	.021726	33	.010683	43	.023148	53	.126310
24	.014362	34	.017857	44	.035714	54	.052631
25	.012650	35	.014151	45	.041791	55	.030769
26	.022546	36	.022332	46	.047297	56	.040816
27	.024478	37	.029216	47	.023255	57	.051282
28	.031348	38	.028490	48	.034934	60	.111111
29	.013852	39	.024596	49	.029556	64	.333333

From these materials the following table has been formed, representing the number attaining to each year of age, from 20 to 57, out of 1000 existing together at the beginning of 20; with the deaths which occur out of each before attaining the next age.

Age.	Living.	Dying.	Age.	Living.	Dying.	Age.	Living.	Dying.	Age.	Living.	Dying.
20	1000	19	30	816	9	40	665	25	50	464	21
21	981	23	31	807	22	41	640	24	51	443	7
22	958	19	32	785	13	42	616	26	52	436	23
23	939	20	33	772	8	43	590	14	53	413	52
24	919	13	34	764	14	44	576	21	54	361	19
25	906	11	35	750	11	45	555	23	55	342	11
26	895	20	36	739	16	46	532	25	56	331	14
27	875	21	37	723	21	47	507	12	57	317	
28	854	27	38	702	20	48	495	17			
29	827	11	39	682	17	49	478	14			

I have not attempted to correct the great irregularities which prevail at the different ages, being desirous of presenting to the reader a table of the mortality as it actually occurred, as well as of showing, from the very imperfection of the data, the importance of continuing the observations in India for a greater length of time, and of extending them over larger classes of persons. The following comparison with tables already in existence, may be interesting; and as the materials are now before the reader, in a shape to enable him to pursue his inquiries, as far as he may think the results worthy of attention, I will not occupy any further space in your valuable Journal by continuing the examination to a greater length.

Out of 1000 existing together at the age of 20, there attain the age of	By the Northampton Table.	By the Stockholm Table. Males.	By the London Tables, from 1771 to 1780.	By the Table given above.
30	854	770	845	816
40	708	540	662	665
50	556	339	463	464
57	445	219	340	317

The correspondance with the London table is curiously exact. With the Carlisle, of course, it is so great as to make a comparison almost useless. Out of 1000 living at 20, 926 would survive to 30, by the Carlisle table. I hope this will not altogether seem an idle inquiry. Many such observations, gathered from different climates and particular classes of individuals, would be interesting to the statist, and might lead to much improvement in the rates for extra risk now charged by the different assurance offices.

I remain, Sir, your obedient servant,

S.

Bridge-street, London, Dec. 28th, 1837.

THE ACARUS SCABIEI.

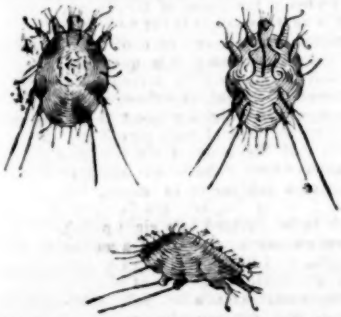
To the Editor of THE LANCET.

SIR:—Permit me, through your Journal, to call the attention of medical practitioners to the *acarus scabiei*, or *sarcopta de la Gale*. The difference of opinion respecting even the existence of the acarus scabiei is, perhaps, owing to the difficulty of discovering it in the vesicles of this disease. Having often seen and examined the animal, I believe I can furnish the profession with some useful observations regarding it. Having, in August, 1834, heard of the discovery of M. Renucci, at the *Hospital of St. Louis*, Paris, and of the experiments of M. Gras, which consisted in the application to the skin of the forearm of two of the animals covered by a watch-glass, which gave rise to scabies, after a few days, I resolved to perform the same experiments. Assisted by Dr. Jacmin, of Paris, I examined for more than six months all the patients affected with scabies in the *Prison de la Force*, and submitted to microscopic observation upwards of 500 insects, which I extracted from these patients. I placed on the skin of the forearm of a young man, with his permission, two of these insects, and watched all their movements with the assistance of a lens, or the naked eye. In about the space of half an hour one of them made its way under the epidermis; the other, more active in its movements, sometimes stopping at the root of the hairs, or in the sulci of the skin, at other times moving about in different directions, did not penetrate the epidermis until after a space of nearly two hours. I took the precaution of surrounding with a circle of ink the point at which they had penetrated the epidermis.

On the following day the skin at each point presented a bright-rose colour, which was soon surmounted by a small vesicle, and at the end of some weeks the young man submitted to the experiment was affected with scabies in its usual form.

Some physicians, without doubting the existence of the acarus scabiei, disbelieve in its being the cause of the disease, inasmuch as, they say, it is not found in all the vesicles, or in every case of the disease. Without discussing this question, which cannot be satisfactorily solved until a great number of careful experiments have been made, and to which I request the attention of English medical men, permit me to observe that the body of the largest acarus scabiei which I have examined is about 4-10 of a millimètre in length, that is to say, $\frac{1}{8}$ of an English line (supposing the inch to be divided into eight parts). The ovum measures only 1-20 of a millimètre in length, or 1-64 of an English line. The young animal, at the moment of its development, nearly equals in bulk that of the ovum, and consequently cannot be seen without the assistance of the microscope. However, its presence irritates the cutis,

and gives rise to the formation of a small vesicle; by-and-by the animal enlarges, hollows out under the epidermis a narrow passage, in which it lodges, occupying always the extremity of the passage, that is to say, the point the most remote from the vesicle in which it commences. It would, in fact, appear that the acarus is unable to turn itself in the narrow route which it has made under the epidermis, in consequence of the long stiff hair-like projections which terminate its four posterior extremities. Hence, it is always at the point of the tortuous passage the most remote from the vesicle, that the animal is met with, the presence of which is indicated by a grey-coloured point in this situation. It is at this point that the epidermis is to be ruptured with the point of a needle, taking care not puncture the vessels and produce hæmorrhage; a small, round, glistening body is then perceived without the assistance of a lens, and which is easily removed attached to the point of the needle. If one of the extremities of this body presents a reddish colour, we are then certain that we have seized the animal. When put on a piece of glass placed on a dark ground, it is easily distinguished by the naked eye, and is seen to drag itself along, or rather walk, for it uses very actively its four anterior extremities to perform that function. When it walks rather quick, it extends together two of these extremities, that is to say, the nearest to the head, on one side, and the farthest from it on the other, and *vice versâ*. I have attempted to represent this kind of movement of the extremities in the drawings which I have sent you. The first represents the back of the acarus in the act of walking; the second shows the abdomen of the insect, and the insertion of the eight extremities; the third indicates its form seen in profile, with the short hairs covering the back, the anterior projection from the head, and the long bristles which terminate the posterior extremities truncated at the tarsus. I have



the honour to remain, Sir, your obedient servant,

BERRIER-FONTAINE, M.D.

THE LANCET.

London, Saturday, January 13, 1838.

THE considerations and practical conclusions which arise from an examination of accurately-kept tables of mortality, are of deep interest, not only in a statistical, but in a moral point of view. The simple calculator, looking upon the duration of human life as a game of chance, which is played by two contending parties, investigates the question commercially, and determines, by accurate computation, the probable period at which mortality must succumb before its invincible antagonist in the race of life; but to the philosopher the lesson which is taught by the records of the departed is of a nobler kind; his investigations are directed to the improvement of metaphysical not of physical science; his conclusions contribute not to the accumulation of money, but of moral principles.

We have frequently been occupied, in the pages of this Journal, by a consideration of statistical documents, which have led to the deduction of several facts interesting and highly useful, so far as the material interests of the community are concerned; on the present occasion, we shall pursue a more novel, though not less pleasing path, and devote a few moments to a question in which most of our readers will be, if they are not actually, interested, viz,, the influence of marriage on the duration of human life.

VOLTAIRE once asserted, that the majority of persons who commit suicide, are unmarried, and adduced this circumstance as a proof that the wedded state is favourable to the prolongation of life. HUFELAND, also, has established the influence of celibacy in rendering still more brief our sojourn upon this earth; these opinions, however, have been warmly combatted by the advocates of "single blessedness," who uphold a contrary doctrine, and it must be confessed

that, upon a *primâ facie* view of the question, the celibatists seem to have much reason upon their side.

The unmarried man, occupying an independent [position, and relieved from the anxieties, not to say troubles, which the possession of a wife, and the care of a family must engender, is enabled to avoid many of those moral causes which exercise a well-known influence in shortening human life; he has to provide but for a single existence; can, generally speaking, change his residence as circumstances of health or convenience may dictate; and can withdraw himself from the action of various agents deleterious to his health, or destructive of his peace of mind, against which the married man is compelled to struggle.

On the side of the female, the dangers which attend, as a necessary consequence, the state of wedlock, are still more evident. The mysterious curse originally pronounced against the fair and frail part of the creation, "in sorrow shalt thou bring forth," &c., still weighs heavy upon it, for of every 108 who bring forth a child, one woman perishes.

Marriage, then, presents a few real, many supposed, inconveniences by which the duration of life must be influenced, but the exact amount of such influence can only be ascertained by an examination of mortality tables in which the circumstances of marriage and celibacy have been accurately noted.

The population registries commonly made, afford but little data upon which we can rely for the solution of the question, What is the influence of marriage upon the duration of human life? Indeed, we are acquainted with only three exact documents relative to this interesting point, and for these we are indebted to Dr. Caspar, of Berlin, who has furnished to us the groundwork of our present observations.

The statistical returns just alluded to, though made in different countries, and at different periods, prove, in the most convincing manner, that marriage contributes very remarkably to lengthen the duration of human life. This is a pleasing proposition; let us then hasten to prove its truth, beginning, as in duty bound, with the ladies.

Odier* has determined the mean duration of life in females from observations made during the years 1761 to 1813, inclusive; and, on arranging the tables which he gives, we obtain the following results relative to married and unmarried females:—

Mean Duration of Life.	In Married Females.	In Unmarried Females.	Difference.
			years
20 years of age	40.33	30.62	9.71
25	36.04	30.51	5.53
30	32.38	28.86	3.52
35	28.86	26.28	2.58
40	25.54	23.38	2.16

The difference of life, then, between married and unmarried females is, on an average, five years; or, to place the fact in a stronger point of view, a young woman of twenty years of age, by marrying, adds nine years and a half to the probable duration of her life.

Odier endeavours to explain this curious and striking difference in the mean duration of life amongst married women, as compared with that of unmarried females, by supposing that women of sound and healthy constitutions are most frequently chosen as partners of the nuptial bed; but such an explanation can have but little weight with those who know that men are, unfortunately, too often influenced in their choice of a wife by motives of interest, and by a thousand other considerations for which the primary object of the institution of marriage is neglected or forgotten.

Having thus demonstrated the great advantage, so far as the prolongation of life may be considered one, which the married female enjoys over the unmarried, let us turn to the male sex, and for our personal

* Bib. Britan., t. lxix. pp. 220—230.

comfort and satisfaction, show that, in giving life to others, the male also increases the probable duration of his own existence. DEPARTIEUX,* who composed a series of tables, comprising a total of 48,540 deaths, during a period of thirty years (from 1715 to 1744), says, in a cursory manner, "it "would appear that people live longer in a "state of marriage than in one of celibacy. "The number of married men who die after "the age of 20 is nearly *one half* less than "the number of bachelors who die at the "same period; and for 43 married men, or "widowers, who attain the age of 90, we "find only six unmarried men reaching the "same age. The number of single women "who die after the age of 20, is about *four* "times greater than that of married females, "or widows, dying after the same period of "life; and 14 virgins only (unmarried "women) arrive at the age of 90, for every "112 married women, or widows, who "attain that advanced period of existence."

The facts thus indicated in general terms, are clearly demonstrated by the following extracts from tables which Dr. CASPAR has calculated from the documents furnished by DEPARTIEUX.

Of every hundred persons there die,—

Period of Life.	Married Men.	Bachelors.	Married Women	Unmarried Women.
Years:				
20 to 30	2.8	31.3	7.7	28.0
30 to 45	18.9	27.4	20.3	19.3

Again, of 100 persons there are alive,—

Up to	Married Men.	Bachelors.	Married Women	Single Women.
30 years	97.2	68.7	92.3	72.
45.....	78.3	41.3	72.0	52.7
60.....	48.1	22.6	49.4	37.2
70.....	27.2	11.1	29.2	23.7

* "Essay on the Probabilities of Human Life," Paris, 1766.

The above tables present a very remarkable difference in the comparative mortality of married and unmarried men, between the ages of 20 and 30. We shall not, however, insist much upon this difference for reasons which must be familiar to all who are in the habit of estimating the true value of calculations of this kind; men, taking the masses, seldom marry before they have acquired a certain position in the world, and attained a degree of comfort or even ease, which, as is well known, contribute very materially to the diminution of mortality; but looking to the period comprised between 30 and 45 years, a period during which men generally marry, we still find a difference of mortality which is considerably in favour of those who have taken unto themselves wives; after the forty-fifth year, this proportion on the side of married men goes on increasing; for the tables show us that, taking 100 married and 100 unmarried individuals, the number of those who live beyond the age of 45 is greater by 36.8 in the former class than in the latter.

This is a fresh proof of the favourable influence which marriage exercises over the duration of human life at the earlier periods of existence; at a later period its influence becomes still more manifest, since for 11 bachelors who live beyond the age of 70 we find no less than 27 married men.

It is unnecessary for us to fatigue the attention of our readers by further reference to tables of mortality, in order to prove a fact which, we believe, has now been fully established; we cannot, however, avoid the temptation of making an extract from the tables composed by BICHES, at Amsterdam, and comprising a period of 12 years, from 1814 to 1826; the results obtained from these tables coinciding, in the most marked manner, with those at which we have already arrived. According to BICHES' calculation, of 100 individuals there die,—

From	Married Men.	Single Men.	Married Women	Single Women.
20 to 30	3.6	33.1	4.7	26.5
30 to 45	17.9	27.1	16.5	24.5
45 to 60	29.2	15.6	22.6	19.2

The above extract sufficiently proves, that the influence of marriage in diminishing mortality has extended to the age in which we live, the only difference of result, between the tables of BICHES, and those of ODIER and DEPARTIEUX, being in the circumstance that the mortality of married women, during the period at which they commonly become mothers, is now, comparatively, less than it was a century ago.

The facts which we have just established, upon the authority of carefully-taken records in France, Switzerland, and Holland, confirm the truth of a proposition for which, perhaps, many of our readers were not prepared, although all will, doubtless, rejoice in the announcement,—that the fulfilment of a pleasing duty, on the part of both sexes, is calculated to add many years to the probable duration of human existence.

WESTMINSTER MEDICAL SOCIETY.

Saturday, Jan. 6 1838,

Dr. WILLIAMS, President.

INFLAMMATION OF THE STOMACH AND THE THORACIC VISCERA.—REMARKABLE SOUND IN THE HEART.

MR. THURNAM related the following case. A man, aged 40, was admitted into the *Westminster Hospital*, on Thursday the 5th of January. He was a butler, and up to the previous Tuesday had always enjoyed excellent health. On that evening, while eating his supper of cold mutton, he swallowed a very small piece of bone, about three or four lines in length, and one or two in thickness. Shortly afterwards, he experienced considerable pain in the throat, which he referred to his having swallowed the spicula of bone. He went to bed and slept well, but the following morning he found himself affected with a pain in the stomach; for the relief of this he applied to a surgeon, was bled, took an emetic, and, afterwards, some purgative medicine. The next day (Thursday), he was admitted into the hospital with the following symptoms:—There was pain in the epigastric region, referred chiefly to the right side, increased upon taking a full inspiration, and on pressure. There was slight difficulty of breathing, which was attributed to the affection in the abdomen; the pulse was feeble, but thrilling. Leeches were applied to the epigastrium; calomel and opium, in repeated doses, administered, and saline purgatives given. He found much relief from the leeching, and on Friday morning felt considerably better; there was, however, an anxious expression of countenance, and a restlessness of manner about him. At 10 o'clock at night he endeavoured to get upright in bed, but fell suddenly back and died. Unfortunately, no examination with the stethoscope had been made. On examination after death, the stomach and duodenum were found considerably inflamed, especially at the smaller curvature of the former; the mucous membrane of the œsophagus and pharynx was also ecchymosed, and there were several aphthous spots observable in the former. There was some engorgement of the mucous membrane of the trachea and larger bronchia, and also of that reflected over the arytenoid cartilages. Severe pleuro-pneumonia had existed in both sides of the chest. There were about eight ounces of a thick yellow albuminous fluid in the pericardium, and a copious deposition of lymph upon the heart, and also on the bag of the pericardium. He, Mr. Thurnam, would inquire whether the disease in the thoracic region had preceded or followed the swallowing of the bone; some gentlemen present at the examination, had considered that the thoracic disease was consequent upon the irritation caused by the foreign body in the stomach, a conclusion which he could not come to. It was a fact entirely new to him if such a pathological law existed; and, indeed, if it did, he doubted whether the short space of time which had elapsed between the period of the bone having been swallowed and the death of the individual, was sufficient to allow of the production of the amount of disease which was present, and especially pericarditis. Was there any recorded case in which an irritating substance, chemical or otherwise, applied to the stomach, had produced inflammation of the thoracic organs? He also thought the case particularly important as exemplifying the great value of physical signs, and the necessity of the employment of the stethoscope in nearly all cases of acute disease.

Dr. JOHNSON had no doubt that if the stethoscope had been applied in this case, the disease in the thorax would have been detected; though the treatment would not have been affected by such discovery, that

which was adopted having been proper for the case. He thought, as a pathological principle, that sixty hours were sufficient to produce the disease which was present in the thoracic region. He thought it impossible to say if it had preceded or followed the gastritis, though he considered they were totally independent of each other as regarded their primary cause. The pericarditis had produced death.

Dr. WILLIAMS had seen two or three cases of a similar kind of universal inflammation, in which the lungs, pleuræ, and pericardium were involved; the symptoms were those rather of general depression than of violence; and the affection was treated under the name of influenza. One of these cases occurred in a boy three years of age, another in a woman between fifty and sixty. The disease went on several days, and was considered severe influenza. It was only two or three days before death that the extent of the disease was detected by careful examination.

Dr. J. JOHNSON said, that, though we might often be deceived from the want of prominent symptoms in diseases, yet prominent symptoms might, occasionally, give great alarm, though they were not dangerous. He had lately been consulted by a gentleman who had just arrived from a foreign climate; he being annoyed by a remarkable symptom, which was a source of great anxiety, and prevented him from sleeping. This symptom was a whistling sound heard in the heart; it was distinctly audible at the distance of several feet, and resembled the quick, sharp whistle which persons are in the habit of employing as a call for dogs. This sound was always present. His general health was unaffected, and he suffered no other inconvenience than that arising from the anxiety of constantly hearing the sound, and a great degree of restlessness. This sound had come on gradually. He believed it accompanied the first sound of the heart, and was heard loudest where the apex of the organ strikes against the ribs, and did not seem to be conveyed along the arteries. There was no other abnormal sound in the heart, but a rather greater degree of impulse than natural existed in it. The pulse was synchronous with the heart, and normal. He (Dr. J.) considered the symptoms to arise from some peculiarity in the semilunar valves of the aorta, but what that peculiarity consisted in he could not offer an opinion. The treatment he had recommended was chiefly of a moral kind, and he had advised the patient to totally disregard the sound, considering it, as he did, of little importance.

Dr. WILLIAMS had seen eight or ten cases in which a whistling sound was present in the heart. Generally speaking, this symptom arose from disease in the aortic valves, by which regurgitation was allowed, and, according to his experience, accompanied the second sound of the heart. He had heard this sound, however, in cases where the mitral valve was affected and the aortic valves were healthy. This sound might go on for years without affecting the general health of the patient, though, in a case of the kind, one of the patients died of fever, slighter than that which probably would have taken off a person not so affected.

BRITISH MEDICAL ASSOCIATION,

Exeter Hall, January 9, 1838.

A MEETING of Council was held this evening,—

Dr. WEBSTER in the chair.

The minutes of the last meeting having been read and confirmed, the following gentlemen were admitted members of the Association:—

Mr. Henry Holt, Grosvenor-terrace, Horse-ferry-road.

Mr. Charles Packer, No. 27, Pitfield-street, Hoxton.

Mr. Skegg, St. Martin's-place, St. Martin's-lane.

The PRESIDENT informed the meeting, with great regret, of the death of one of their Council, Mr. Whitmore, and notified that the election of another Councillor would take place at their next meeting.

Mr. Lavies, of King-street, Westminster, was then unanimously elected one of the Council, to fill a previous vacancy.

A letter was then read by the President from Dr. Wilmot, of Stroud, announcing the formation of a Branch Association, and its wish to co-operate with the parent Association in London, as also an account of a meeting held at Stroud on the 3rd of January.

The PRESIDENT read a communication from a Committee of Medical Practitioners of Plymouth, asking some questions relative to the objects of the contemplated National Faculty of Medicine.

A communication was also received from Mr. Rumsey, of Chesham, on the subject of the Poor-Law question.

The Honorary Solicitor (Mr. D. DAVIES) read the report which had been drawn up by the Committee chosen to take into consideration the mode of addressing the Committee of the House of Lords relative to the Imprisonment for Debt Bill, and some method of securing payment to medical men.

The SECRETARY also read the report of the Poor-Law Committee relative to the better remuneration of parochial medical officers, and the mode of their appointment, which was received and ordered to be taken into consideration on Tuesday next.

CASE OF

ABSCESS OF THE LIVER

Bursting spontaneously into the Colon and the Thorax, and terminating successfully. By D. STEWART, *M.D.*

Mr. J. C. S. was seized on the 6th of August, in Canton, with inflammatory symptoms, for which he was leeched on the 10th or 12th, and bled from the arm on the 14th or 15th, and had this treatment afterwards followed up by a succession of leeching and blistering, and the administration of calomel every night, until the severity of the symptoms gave way. The disease was so far got under before his leaving Canton that he was considered out of danger by his medical attendants, and was recommended by them to go to Macao for the benefit of a purer atmosphere, where he arrived on the 1st of September, labouring under a relapse of all his former symptoms, but of an aggravated and more strongly-marked character. He complained of much acute tenderness over the whole region of the liver, so much so as to be scarcely able to bear any degree of pressure of the hand upon any part of it. An attempt even to take a deep inspiration caused very severe pain in the right side. His respiration was short, quick, and attended with cough; tongue coated, mouth parched; quick and sharp pulse; anxiety of countenance, and great general prostration; symptoms clearly indicating that the inflammatory process had exceeded *the bounds* which admit of a termination of active disease by *resolution*.

The application of leeches to the seat of pain, which was had recourse to *repeatedly*, and carried as far each time as his reduced state would admit of, afforded only temporary relief. His bowels were carefully attended to and kept open by means of emollient clysters, with occasional small doses of calomel, and rhubarb, and castor-oil. Counter-irritation by means of blisters and the tartar emetic ointment was kept up; the nitro-muriatic bath was tried, and persevered in for some time, notwithstanding all which no decided benefit was produced.

The above treatment was pursued until the 13th, when a sudden change for the better, in the character of the symptoms, took place. He felt himself all at once relieved, and was sensible of something having given way within him. On examining his motions next day a very considerable quantity of purulent matter was discerned in them, and in those he passed for several days after, which sufficiently warranted the opinion that had been held, of an abscess having formed in the liver. For ten or twelve days after this he improved considerably, when another return of the symptoms took place. The same remedies were employed as before, together with anodyne fomentations, with the same want of success; he got daily worse, and serious apprehensions regarding his recovery were entertained, when, on the 4th of October, he experienced another sudden change for the better. But this abscess being higher situated in the organ than the former one burst into the *thorax* instead of the *colon*, and the matter was discharged by expectoration. Ever since he has continued to get better, and nothing further was required than a careful attention to the state of the bowels, keeping them open by mild aperients and emollient clysters, improving the strength generally by demulcent tonics and a strictly-regulated diet, and allaying nervous irritability and procuring sleep by means of night-draughts containing the acetate of morphia.

A few days ago he felt some uneasiness in the right side; the cupping-glasses were had recourse to, but as he could not endure them leeches were applied in their stead, and with a very good effect. He is now recovering rapidly.— *Calcutta Quarterly Journal*, No. 2, 1837.

CASE OF FRACTURE

OF THE

HUMERUS BY MUSCULAR ACTION.

ROBERT ———, aged 41, volunteered from H. M. 30th Regiment, in 1828. Has been 23 years in the service, and 17 years in India. Previously to 1828 he suffered from dysentery, hepatitis, and fever; since the date above mentioned he has not been in hopsital until now, and has enjoyed good health. Complexion swarthy.

Nov. 24th. Admitted at the evening visit with much swelling of the upper arm (right), and a very evident fracture of the humerus above the condyles; states that he met with the accident in throwing a long bullet, which he delivered over-handed, and without falling, so that the fracture must have been caused by muscular action solely.

The ends of the bone were placed in apposition—the forearm flexed on the upper arm—the limb supported on firm pillows, and kept constantly wet with the diluted lead lotion; splints were also *loosely* applied to steady the limb. He was bled to 24 ounces, and a purgative was administered.

Nov. 25th. No sleep; the splints were slackened during the night, owing to the degree of swelling, which is considerable; medicine beginning to act. Lotion continued. Diet, soup.

P.M. Swelling but little increased since morning; is quite easy; five stools.

Nov. 26th. Less heat and swelling; slept for two hours; one stool; tongue whitish; skin cool; pulse natural.

P.M. Arm hot and more swollen; slept for five or six hours during the day; sixty

leeches were applied, afterwards fomentations, then the lotion was resumed; one stool, scanty. Castor-oil, ℥j.

Nov. 27th. Slept pretty well; the leeches bled freely, and the arm is somewhat reduced; no stool; tongue white; pulse soft, natural.

The leeches, fomentations, and lotion were continued.

P.M. Quite easy all day; two evacuations from the oil; the limb lies comfortably, and is decreasing.

On the evening of the 28th, there being much increased heat of the limb, and the swelling not declining, sixty leeches were again applied.

Nov. 29th. Easy all night; swelling decreased; no constitutional disturbance.

P.M. The swelling having declined considerably it was necessary to re-apply the splints, which had become too loose.

Dec. 7th. The bones remain in apposition; the splints again require adjustment; there is considerable swelling and discolouration, attended with pain around the elbowjoint; a bandage was now applied next to the skin, from the hand to the shoulder, and the splints fitted over it; bowels regular; general health good. Diet sp. chicken-broth; half lb. bread extra.

Dec. 24th. On removing the bandage and splints, in order to re-apply them, the arm presented its natural outline; union apparently has taken place. On the 9th he was allowed chicken diet.

Jan. 13th, 1836. Union having taken place firmly he is discharged as a convalescent. The sick were at this time proceeding from Mirat to Gházípur by water. On the arrival of the regiment at Gházípur, March 1st, 1836, the arm was perfectly straight, free from deformity, and strong. The motion of the elbowjoint unrestricted and natural.—*Calcutta Quarterly Journal*, No. 2, 1837.

UNIVERSITY COLLEGE HOSPITAL.

PHLEGMASIA DOLENS.

L—— C——, aged 23, was admitted November 7, under the care of Dr. Elliotson. She is married, and has four children. Her last confinement was on the 1st of September, three weeks after which she went out for the first time. The following day she felt a pain in the right thigh, which quickly proceeded up to the hip, and downwards to the leg. The limb soon began to swell, and the pain to increase, and the pain and swelling have continued to increase up to the present time. She has been cupped and leeched on the hip and thigh, and fomentations have been applied to these parts, without producing any relief.

At present she is much reduced in flesh and strength. She has violent shooting pains in, and extreme tenderness of, the right thigh, but particularly in the tracts of the femoral, popliteal, and crural veins, so that the least touching of these parts with the finger, or by the disturbance of the bedclothes, produces great pain. The whole limb is much swollen, the femoral vein feels indurated. The tongue is loaded with a brown fur in the centre, surrounded by a white-furred margin. The edge of the tongue is of its natural colour; appetite bad; bowels much relaxed. She sleeps very badly; the respiration is easy; no cough; pulse 100, and weak.

8. Twelve leeches, followed by warm fomentations, were applied to the thigh this morning; in the evening Dr. Elliotson visited her, and ordered the leeches and warm bathing to be repeated. To have two grains of opium directly; three grains of calomel, and ten grains of kino, every three hours.

9. Slept better; has an intense throbbing pain about the upper third of the back of the thigh. Mr. Taylor thought he felt a fluctuation in that situation; he made an incision, and gave exit to about a pint of thin pus, which afforded immediate relief. Pulse 136, and sharp; to have half a grain of muriate of morphia directly; beef tea, and a small quantity of wine, with carbonate of iron.

10. Pain and swelling of the thigh diminished. About two pints of fluid escaped in the night from the wound.

14. Has been improving since the last report.

28. Has been getting better since the last report, but last night suffered much pain at the inner side of the middle third of the thigh, which part is reddened, and feels indurated. A dozen leeches were immediately applied to the part, and the next day the inflammation was gone. The iron, which had been left off during the stage of inflammation, was resumed in a day or two.

December 19. Improving gradually and steadily since last report, and is now well.

This case, said Dr. Elliotson, in his clinical lecture, was a good illustration of the disease termed phlegmasia dolens, and was the first of the kind that had been under his care in the hospital since its foundation. Phlegmasia dolens consisted in inflammation of the veins of the lower extremity and pelvis, causing fibrine to be poured forth, and blocking up the passages for the blood. Dr. Davis, of that hospital, was the first to point out the true nature of the disease; the facts he had brought forward in support of his opinion were of great interest. Phlegmasia dolens was much more common in women than men, and more so in puerperal women than in others. Men, however, did occasionally suffer from it. The treatment of the disease consisted in local and general bleeding, with the free exhibi-

tion of mercury. The treatment pursued in the case under consideration was successful, no signs of inflammation, or obstruction, existing at her dismissal. Regarding the suppuration, it probably in this case assisted the cure, though after the discharge was nearly gone the pain, tenderness, and œdema returned. These gave way before the antiphlogistic treatment, and after three days the iron, which had been left off, was resumed, and did not stimulate improperly.

Croton-oil as an External Irritant.—M. Boileau has lately addressed a memoir to the *Royal Academy of Medicine*, on the effects of croton-oil in certain chronic affections of the stomach, particularly in gastralgia. The conclusions at which the author arrives, are drawn from seven cases of individuals affected, for a considerable time, with pains about the region of the stomach, with or without vomiting, fever, general emaciation, &c. One case was that of a pregnant woman, whose stomach was unable to contain any kind of substance, whether solid or liquid. A second was relative to a child who laboured under very violent gastralgia. Both the patients were cured in a brief space of time, by repeated frictions of croton-oil (eight drops) over the epigastrium. In children, the application of the croton-oil generally produced purging and an eruption of small pustules over the part. It is necessary that the oil employed should be unadulterated.—*Jour. de Con. Med. Chir.*, No. 5, 1837.

TO CORRESPONDENTS.

The communication of *Dr. G. C. Holland* on "Animal Heat," shall appear next week.

Amator Doctrinæ. The regulation has been repeatedly condemned in this Journal, and as the views of our correspondent are neither novel, nor supported by novel illustrations, we must devote our space, at present, to other topics.

Mr. W. D. Savage will find the information he wishes in some one of our advertising columns.

The publication of Mr. T. P.'s letter on vaccination had been unavoidably delayed for weeks after its reception; however, as our correspondent seems peculiarly anxious concerning its fate, it shall certainly appear next week.

The communications of *Mr. Edwards*, *Mr. Eales*, *Mr. Croxton*, *Mr. Burgess*, *Mr. Bree*, *Mr. J. M. Brown*, *Viator*, *Anti-monopolist*, and *Mr. C. Ottley*, have been received. We hope to be able to find room for the greater number of them next week.

A Correspondent inquires—"Who is the Secretary to the *Society for the Relief of Widows and Orphans of Medical Men*, and what is his address, as (he adds) I am anxious to contribute towards so excellent a fund."

Theta. The effect, though, perhaps, not the peculiar interval, is common enough; but no general truth or principle can be deduced from the facts announced, and it is not therefore desirable to publish them.

The sketch by *A Constant Reader* presents touches of character which, however faithful and offensive to good taste and professional respectability, are derived wholly from private and personal transactions. The exhibition of a medical portrait in a public library may be the work of the artist, not of the subject.

Mr. Denham has replied to the recent note of Mr. Jeaffreson, in a letter, from which we have room to publish only the following brief extracts. Respecting the case of Smith, he asks—"Of what use were Mr. Costello's scientific directions, if Smith's medical attendant did not comply with them?" which Mr. Denham thinks he "evidently did not." Relative to a passage in his criticism, Mr. Denham remarks, that he did not say, as Mr. Jeaffreson implies, that "future lithic deposit can be *certainly* prevented."

We have received a letter from *Dr. Dickson*, of Cheltenham, containing some further comments on the recent subject of controversy between him and Dr. Johnson, called forth, on this occasion, by an article in the last number of Dr. Johnson's medical journal; but, as we are resolved not to revive any of the allegations which are supported only by declamatory remarks, we can consent to publish only the following passage and note, which Dr. Dickson considers to be essential for his justification in the character of an accuser:—"In the case of Mr. Gibbon," says Dr. Dickson, "Dr. Johnson denies having taken a fee at all. * * * Let this denial be reconciled with the following letter, which I received by post this morning, from the widow of Mr. Gibbon, a gentleman whose profession Dr. Johnson admits that he knew, and to whom, he says, he gave gratuitous attendance:—'Ludlow, Jan. 5th, 1838. Dear Sir:—I last night received your letter, and hasten to reply to it. I regularly offered Dr. James Johnson a fee every visit, but he only took it every second. With the compliments of the season, I remain yours truly,

(Signed) "'H. Gibbon.'"

Errata.—In the letter of Mr. Henry Rees, Lancet, Dec. 30, page 486, line 21, for "rivers" read *sewers*; l. 37, 39, for "eyebrow" read *right-eyebrow*; p. 487, col. 2, l. 20, for "surgeon" read *dungeon*; l. 43, for "manageable" read *most agreeable*; p. 488, l. 45, for "attends" read *attacks*.